

Torrey Pines Road, through 5.2-26, *Proposed View: North Torrey Pines Road*, the Torrey East Building would be visible to drivers, although the structure would be massed away from the street, existing landscaping and street trees would remain and supplemental plant material would be added where the parking lot would be removed to buffer the façade of the structure. In addition, North Torrey Pines Road rises in grade from the elevation of the parking lot (equivalent to the finished grade of the proposed structure) to approximately eight feet above the parking lot as it travels north, lessening the visibility of the proposed structure. Development of the Torrey East Building would not block any scenic vista or view of the Pacific Ocean since none exists along this section of North Torrey Pines Road.

Pursuant to SDMC 132.0403(b-c), the proposed project would preserve existing views along Torrey Pines Scenic Drive through construction of the Salk Community Center Building on the lowest portion of the site on the north mesa, and placement of the adjacent underground parking garage on the upper portion of the north mesa. Development of the Salk Community Center Building on the north mesa at the western end of the site would extend into the existing viewshed but would preserve and restore a 360-foot wide view corridor that would allow for long-range views of the Pacific Ocean horizon across the project site from Torrey Pines Scenic Drive, part of which is currently compromised, as described below. A visual simulation of the proposed project from Location 1 along this roadway is provided in Figure 5.2-27, *Proposed View: Torrey Pines Scenic Drive*.

As noted under Existing Conditions, the current oceanward view is compromised by the existing parking lot, associated cars, streetscape trees, parking lot trees and light poles—all of which are located in the foreground of the westerly view and degrade the quality of the southern part of the viewshed. As discussed in Section 5.1, *Land Use*, of this report, the proposed project would restore public views through removing the existing negative features that clutter the ocean view (i.e., light standards, cars, and parking lot landscaping) and replacing them with a phased building, underground parking, low architectural walls, low-growing vegetation and lawn which would provide for enhanced short- and long-range views of the ocean horizon. In addition, views from public vantage points west of the project site, such as Torrey Pines City Park would be unaffected by the proposed project (as discussed below). Construction of the daycare facility and temporary housing would not block any views from public roads, since no public roads occur near that portion of the project site (and since the future site access would be via a private driveway on the Institute property).

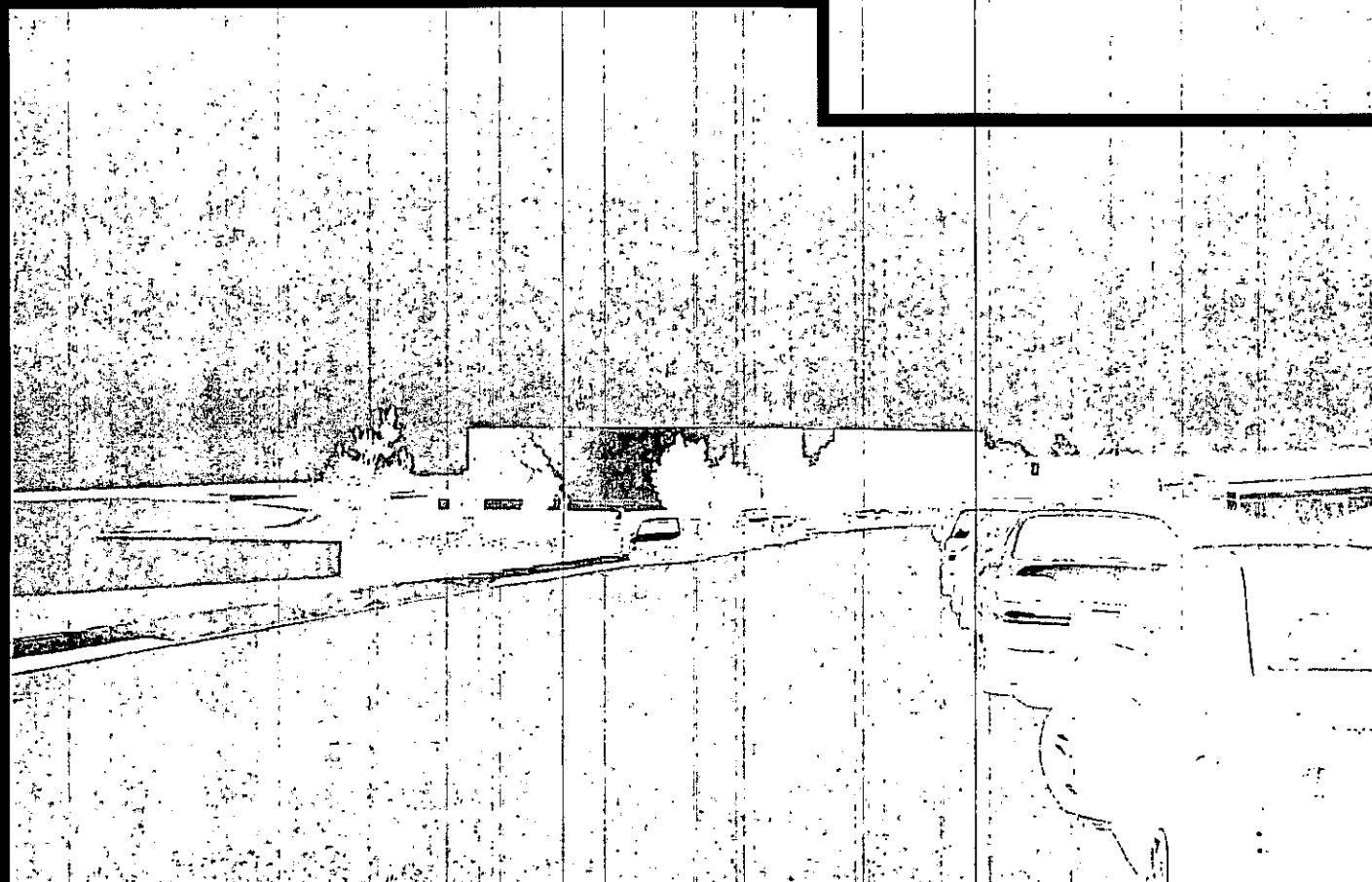
A substantial view blockage of a public resource is considered significant when the project is moderate or large in scale, would exceed the allowed height or bulk regulations or would have a cumulative effect by opening up a new area for development which would result in an extensive view blockage. The Salk Community Center would be considered moderate to large in scale because it would account for approximately half the new construction proposed on site (or 117,000 square feet [23 percent of the maximum allowed 500,000 square feet]) in a location where views of the ocean and scenic coastal areas are available. Although moderate to large in scale, the proposed project would not conflict with land use policies within the Community Plan and North City LCP directed at protecting views of the

ocean and scenic coastal areas, since such views would be preserved, restored and enhanced by the proposed project design. Specifically, the rooftop lawn of the below-grade parking structure along Torrey Pines Scenic Drive would be approximately 360 feet wide. Therefore, in conjunction with removal of the existing cluttering negative features (see above), implementation of this broad view corridor atop the parking garage would preserve potential views and enhance existing views from Torrey Pines Scenic Drive to the coast, in accordance with SDMC 132.0403(b). Thus, despite the size of the proposed project, existing views of a public resource would be preserved and the project design would not conflict with land use policies protecting views of the ocean and scenic coastal areas. Therefore, the proposed structure's encroachment into the public view along Torrey Pines Scenic Drive would not be substantial and would be considered a less than significant visual impact (also see Table 5.1-1 and Issue 1 under the *Land Use* section of this report for additional discussion of the project's consistency with visual policies).

Public Parks/Trails

As noted above, under Existing Conditions, Torrey Pines City Park is located immediately west of the project site. The proposed project would be visible from trails within the Park and from the lawn at the Torrey Pines Gliderport (refer to Figure 5.2-28, *Proposed View: Torrey Pines Gliderport Lawn*, for a visual simulation from the Gliderport lawn). From the perspective of the public trails in Torrey Pines City Park, the proposed project would develop on a parking lot and an undeveloped mesa while preserving the natural slopes that interface with the parkland. Development of the site would be visually consistent in terms of stature, bulk and scale with the existing Institute, private homes to the south and structures on the UCSD campus that are visible from those vantage points on the coastal bluff of La Jolla. The proposed project would not be visible from the public viewing area overlooking the Gliderport staging area because of the existing park structure that blocks those views (Figure 5.2-12, *Photo Location 11: Gliderport Viewing Area*). As noted above, no views of the project site are available from Torrey Pines City Beach or the adjacent surf zone due to the intervening bluffs that block easterly views. The Salk Community Center Building would be briefly visible from a short section of public trail located south of the project site as shown in the visual simulation from Location 6 (Figure refer to Figure 5.2-29, *Proposed View: Top of Southwest Trail*). However, the predominant views from this segment of trail are of the surrounding slopes and all other trails and public viewing areas for the Torrey Pines City Park are west-facing. Another visual simulation from a trail segment west of the project site within Torrey Pines City Park is shown in Figure 5.2-30, *Proposed View: Top of Western Trail*. As shown in this figure, the proposed buildings on the north mesa would not block or detract from current views east toward the original laboratory buildings or the campus as a whole. Therefore, the proposed buildings would not cause a substantial view blockage of the Pacific Ocean or scenic coastal areas, which is the dominant and primary view from the park, so the impacts would not be considered significant.

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Proposed View



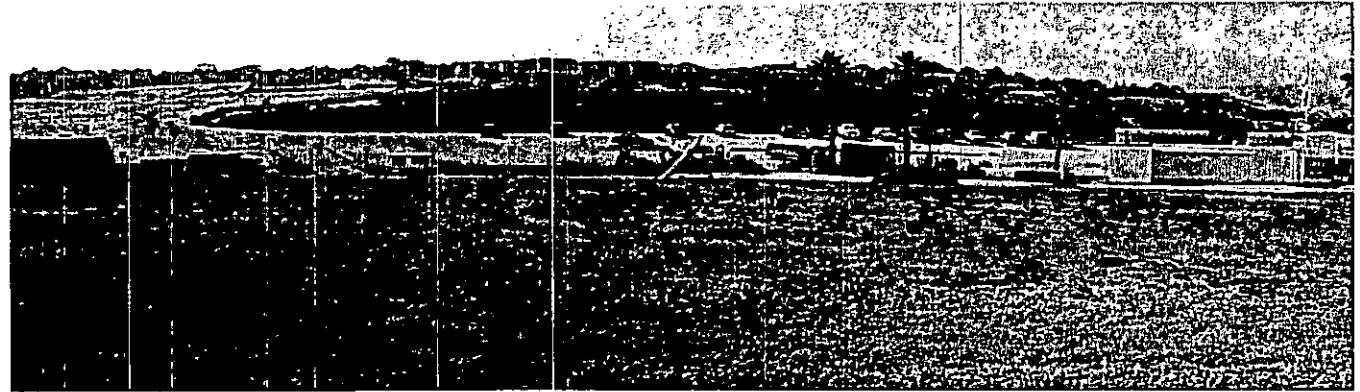
Existing View

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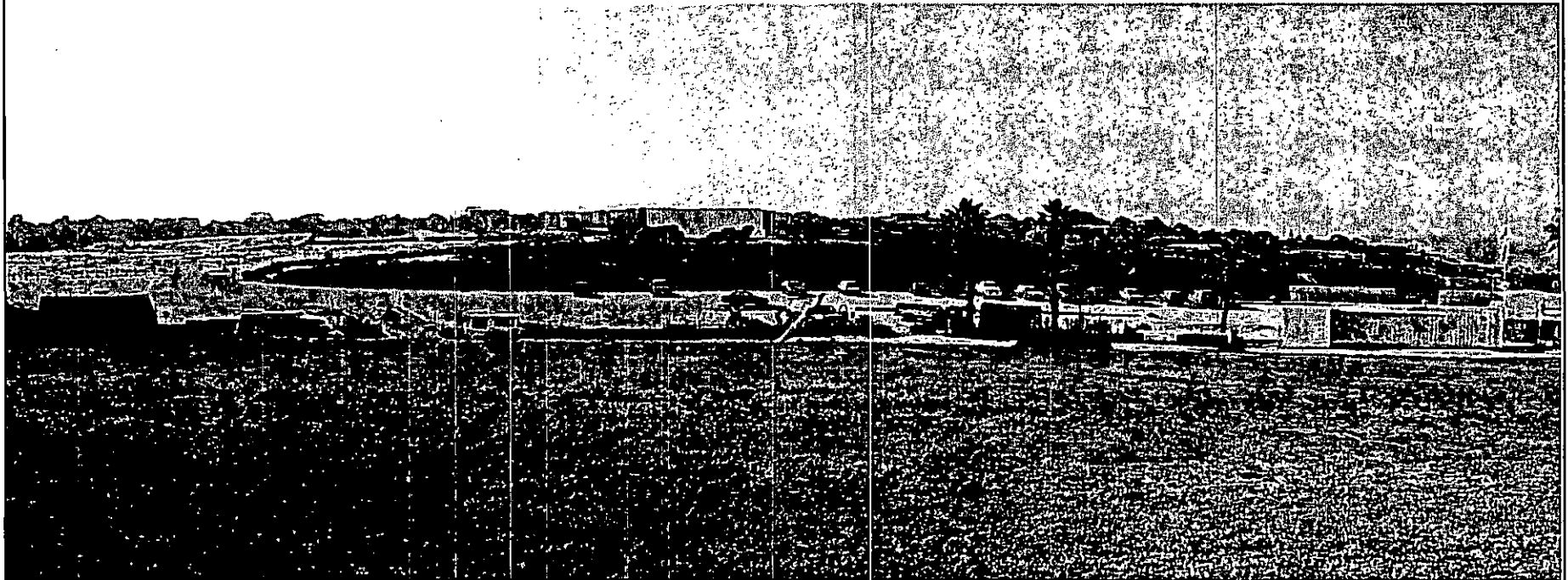
Proposed View for Refined Project Design: Torrey Pines Scenic Drive

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Figure 5.2-27



Existing View



Proposed View

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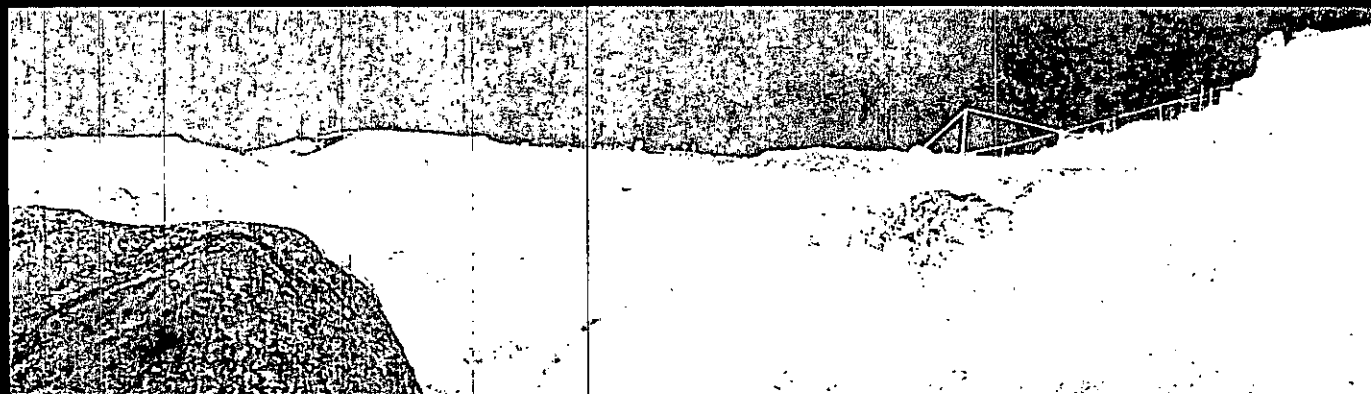
Proposed View for Refined Project Design: Torrey Pines Gliderport Lawn

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Figure 5.2-28

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Existing View



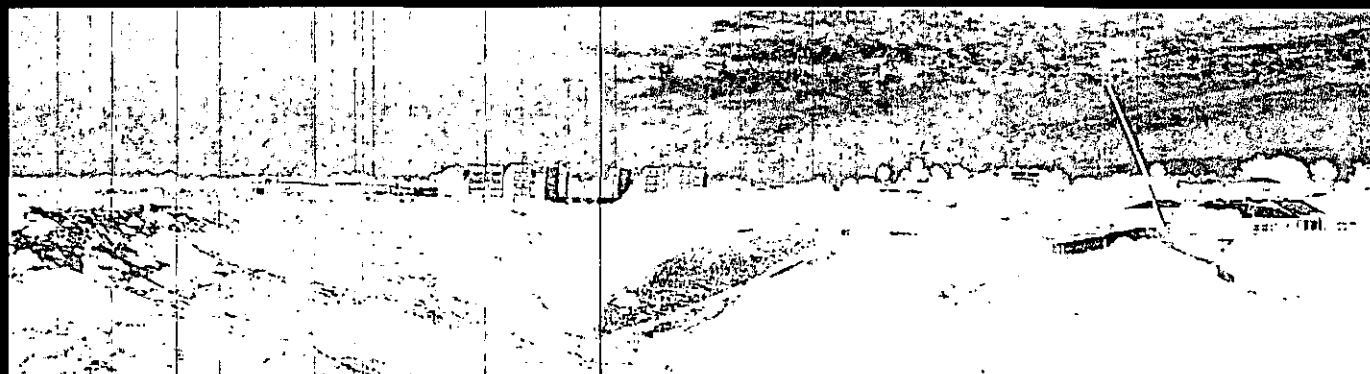
Proposed View

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Proposed View: Top of Southwest Trail

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Figure 5.2-29



Existing View



Proposed View

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Proposed View: Top of Western Trail

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Figure 5.2-30

Significance of Impact

No substantial view blockage through a designated view corridor or of the Pacific Ocean or scenic coastal areas would occur from North Torrey Pines Road or from public trails and the Torrey Pines Gliderport within Torrey Pines City Park. As designed, the Salk Community Center Building would encroach into long-range views of the ocean and La Jolla coastline for a short segment of Torrey Pines Scenic Drive. Views from the road are not specifically identified as a designated view corridor, and project impacts to the view would not be considered substantial. Furthermore, the proposed project would result in creation of a substantial view corridor atop the proposed underground parking garage, in place of the existing surface lot and negative features (i.e., light standards, cars, and parking lot landscaping), which currently degrade views of the ocean and scenic coastal areas from Torrey Pines Scenic Drive. Therefore, the proposed project would preserve and enhance scenic ocean views offered from the road, which would be consistent with local and regional land use policy protecting such views. Therefore, the proposed project would result in a less than significant impact on visual quality.

Mitigation Measures, Monitoring and Reporting Program

No significant scenic view impacts are identified; therefore, no mitigation is required.

Issue 2: Would the proposal result in the creation of a negative aesthetic site or project?

The proposed project involves the phased construction of several scientific research and support buildings in an area that is considered scenic, as described under Issue 1, due to its proximity to the coastline and undeveloped canyon system of Torrey Pines City Park. The proposed project would incorporate development of approximately 11 of the 26.3 acres on site (including redevelopment of some of the currently developed 18.4 acres). Specific building plans are proposed for the daycare facility, north lawn core facility and Torrey East buildings, while design guidelines are proposed for the Salk Community Center Building, greenhouses and temporary housing units. Although phased, the proposed project has been designed in a comprehensive manner that integrates the new architecture and landscaping with the style of the existing buildings and landscape character of the site. The proposed buildings would be constructed using the same type and quality of building materials that comprise the existing permanent structures on site, including architectural concrete, glass, travertine stone, stainless steel and teak wood. The only exception to these building materials would be the three proposed greenhouses, which would resemble the existing wood-frame and glass greenhouse in architectural character. The north lawn core facility adjacent to the northern property line would be constructed in a basement configuration below grade and would only exhibit a planted concrete wall along its western facade, light wells and a lawn on the surface. The specific architectural features of the proposed buildings are described in detail in Section 3.0, *Project Description*, of this report. In all cases, the proposed structures would also respect the height, bulk and scale regulations of the SDMC.

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Construction of the Torrey East Building and the Salk Community Center Building would redevelop existing surface parking lots on site and improve areas currently covered by asphalt. Because those building sites are already developed, the proposed project would not substantially alter their existing urban character. The intensity of development on site would be visibly increased along the public roads fronting the Institute (i.e., North Torrey Pines Road and Torrey Pines Scenic Drive) as one-story temporary buildings and surface parking lots would be replaced with larger, two- to four-story scientific research buildings placed closer to the street than existing campus buildings. Placement of the north lawn core facility below grade would minimize perceived changes on site and retain views of the original laboratory building. The project design includes architectural and visual interest through the use of façade fenestration, building articulation (e.g., use of columns, projections, towers, windows, doors and niches) and other design elements as detailed in the architectural design guidelines that are summarized in Section 3.0, *Project Description*, of this report. Based on the design guidelines, no square box-like buildings with large, unarticulated walls would be allowed along areas visible from public streets, adjacent residential properties or open space. In addition, the Torrey East Building would be set back from the eastern edge of the existing parking lot and its massing would step away from North Torrey Pines Road. Existing landscaping and street trees would remain and supplemental landscaping would be installed along North Torrey Pines Road to buffer views of the new building. The proposed project's visual compatibility with the historic architecture on site is addressed in Section 5.4, *Historic Resources*, of this report.

On the south mesa, where the daycare facility and temporary housing are proposed, the character of the area would substantially change through the removal of native vegetation, extension of the private driveway and development of new structures. However, the proposed facilities on the south mesa would not be of a size, scale or design that would markedly contrast with the character of the surrounding area, which supports the original laboratory building and large, custom residential homes. The height of the proposed daycare facility (approximately 12 feet) and temporary housing (approximately 20 to 30 feet) would be comparable to that of adjacent buildings in the area and the rooflines would step down to the west with the natural topography. In addition, the daycare facility and housing would be set back from the steep hillsides on site, thus preserving the natural topography that interfaces with Torrey Pines City Park. No crib or retaining walls greater than six feet in height are proposed on site. A 250-foot long retaining wall averaging approximately 5 feet in height would be placed along the southern property line parallel to the private driveway. The wall would be landscaped with shrubs and trees for screening purposes and would not be visible from any public roadways or vantage points.

Significance of Impact

The proposed project would respect the site's natural topography, has been designed to be in character with the existing building materials and landscaping and would respect the height and bulk regulations of the SDMC; therefore, it would not produce a disorganized appearance. Architectural interest would be provided through the use of articulated facades, landscaping and high quality

building materials. The only retaining wall longer than 50 feet (along the southern property boundary) would be less than six feet in height, landscaped and not visible from any public roadways. The proposed project would not create a visually monotonous environment. For the above reasons, a significant aesthetic impact is not identified.

Mitigation Measures, Monitoring and Reporting Program

No significant aesthetic impacts are identified; therefore, no mitigation is required.

Issue 3: Would the proposal result in project bulk, scale, materials or style which would be incompatible with surrounding development?

Issue 4: Would the proposal result in substantial alteration to the existing or planned character of the area?

The project site is currently a scientific research facility and the entire property is planned for scientific research use in the Community Plan. The proposed buildings would be compatible with the existing Institute as discussed above under Issue 2. The proposed buildings would be two to four stories and lower in height than the original laboratory buildings, which were developed prior to the 30-foot building height limit. As described under Neighborhood Character in the *Existing Conditions* section of this report, development surrounding the property has no single theme or architectural style. Buildings proposed on site would, however, be compatible with the materials and style of the modern architectural theme created on site by Louis Kahn.

Development of the east parking lot and the northwest parking lot would not result in a substantial change in existing character for the site since those areas of the Institute campus have been developed for many years. The proposed structures would be compatible with existing structures in the area in terms of height and bulk. In addition, the north lawn core facility would be placed underground, thereby maintaining visual access to the original laboratory building that contributes to the character of the project area. Development of the undeveloped south mesa would have the potential to substantially alter the visual character of that part of the site because of its currently undeveloped character; however, the daycare facility and housing are proposed at the westernmost end of the mesa near the southern property boundary and would not affect the naturally steep hillsides on that portion of the property. The stature and visual intensity of the daycare facility and housing units would be much less than existing development in the area, including homes south of the campus. The north-facing slopes and steep hillsides of the southern mesa, which are adjacent to the off-site finger canyon, would be left undeveloped. In terms of neighborhood character changes, no community identification symbols or landmarks would be removed, isolated or visually degraded as a result of the proposed project (refer to Section 5.4, *Historical Resources*, for a discussion of the project effects on the existing

historic resources on site). No significant aesthetic impact would be created by the proposed project as discussed above under Issue 2.

Significance of Impact

The project design would be consistent with existing development in the area in terms of bulk and scale. The architectural character of the structures would not contrast with adjacent development since a single theme or architectural style is not present in the project area. More intensive development is concentrated on the developed portions of the campus, with lower stature buildings proposed on the undeveloped area. The existing steep hillsides and their native habitat would remain undeveloped. No significant impacts to existing or planned neighborhood character would occur.

Mitigation Measures, Monitoring and Reporting Program

No significant neighborhood character impacts are identified; therefore, no mitigation is required.

Issue 5: Would the proposal result in the loss of any distinctive or landmark tree(s) or stand of mature trees as identified in the community plan?

The Community Plan does not identify any of the trees on site as important scenic resources in need of preservation. Several mature eucalyptus trees within the eastern parking lot would be removed to make way for the Torrey East Building. The majority of the mature trees around the outer perimeter of the parking lot would be preserved in place. The south mesa does not contain any trees, while the trees on the north mesa are not tall in stature, are planted within the parking lot and along the street, and are not visually distinctive. Replacement and supplemental landscaping is proposed throughout the site and would more than offset any loss of existing trees associated with project development. Project effects on the Chinese fringe trees in the eastern parking lot that were planted as part of the original landscape plan for the Institute are evaluated in Section 5.4, *Historical Resources*, of this report.

Significance of Impact

The proposed project would not result in the loss of any distinctive or landmark tree(s) or stand of mature trees as identified in the Community Plan. No significant neighborhood character impacts related to tree loss would occur.

Mitigation Measures, Monitoring and Reporting Program

No significant visual impacts due to tree removals are identified; therefore, no mitigation is required.

Issue 6: Would the proposal result in a substantial change in existing or planned surface relief features?

Proposed grading would entail 30,000 cubic yards (cy) of cut and 5,000 cy of fill, in addition to 200,000 cy of basement excavation. The bulk of the non-basement grading would occur in developed areas of the site and no steep hillsides would be disturbed. The grading plan would be implemented in phases as each component of the project is built. On the southwestern portion of the site, grading would change the existing natural landform where slopes are less than 25 percent by creating building pads and playground area for the daycare facility and housing units. Manufactured slopes constructed to support the building pads would not be higher than 10 feet or steeper than 2:1 (horizontal to vertical) gradient. Mass terracing of the natural landform is not proposed. The natural landform would be emulated, as the finished grades of the pads would step down with the natural topography. In addition, approximately ~~5.57~~ 5.82 acres of the site would remain undeveloped, including the mesa top, north-facing slopes and steep hillsides below the daycare facility and housing units of the south mesa and the south-facing slopes at the western end of the north mesa.

Although the quantity of grading (i.e., 35,000 cy over 11.4 acres) would exceed the City's significance threshold of 2,000 cy per graded acre, the grading plans demonstrate that the proposed landforms would closely imitate the existing on-site landform and proposed grades would not vary substantially from the natural landforms. On the south mesa where the natural terrain exists, finished grades would be within approximately 5 to 10 feet of existing grades and the greatest elevation change would occur in association with the cut for the daycare facility playground, which must be level according to state licensing requirements. Manufactured slopes are proposed along the private driveway leading to the daycare facility and along the western edge of the daycare facility. Proposed slopes would be less than 10 feet in height and would not vary substantially from the natural elevations. Minimal manufactured slopes are proposed on the north mesa and other parts of the project site. Therefore, a substantial change in the existing landform would not occur.

Significance of Impact

The proposed project would not substantially alter existing natural landforms, no steep hillsides would be graded and minimal manufactured slopes would be constructed. Project grading quantities would exceed the City's threshold, but the grading plans demonstrate that the proposed landforms and slopes would generally follow the existing landforms. No significant landform alteration impacts would occur.

Mitigation Measures, Monitoring and Reporting Program

No significant landform alteration impacts are identified; therefore, no mitigation measures are required.

Issue 7: Would the proposal result in substantial light and glare which would adversely affect daytime or nighttime views in the area?

The proposed project would remove existing overhead lighting poles on the east and northwest parking lots and replace them with underground parking structures, building lights and pedestrian lighting as described in Section 3.2.4.7, *Landscaping and Lighting*, of this report. New sources of building light would be placed on the south mesa where no lighting currently exists. New exterior lighting would be integrated into designs of buildings, landscape elements and signage and would provide security and way finding for pedestrians and new surface parking areas. Typical walkway lighting would include bollard fixtures, in-grade path fixtures and recessed path fixtures. Accent lighting would be provided at building entries. All outdoor lighting would be installed in accordance with the lighting regulations in the SDMC and would be shielded to prevent a substantial amount of light from being emitted onto adjacent properties and into open space (in accordance with the SDMC and the MSCP Land Use Adjacency Guidelines). Reflective building materials are not proposed for more than 50 percent of any single elevation of a building exterior. In addition, the proposed project would emit less ambient light than currently is produced on site (due to the removal of overhead light poles and the under-grounding of parking areas) and new light sources would not be substantial.

Significance of Impact

The proposed project would produce less ambient light than exists on site due to the removal of existing light poles in parking lots and the undergrounding of parking. New light sources would not be substantial and would be shielded away from adjacent properties and the MHPA. Highly reflective building materials are not proposed. No significant light and glare impacts would occur.

Mitigation Measures, Monitoring and Reporting Program

No significant light or glare impacts are identified; therefore, no mitigation measures are required.

5.3 BIOLOGICAL RESOURCES

This section of the EIR is summarized from the Biological Technical Report (BTR) completed by HELIX Environmental Planning, Inc. (HELIX 20087a) and found in its entirety in Appendix B of this EIR. The BTR documents the current biological conditions on the 26.3-acre project site, the project's impacts on biological resources, and corresponding mitigation measures. The BTR also contains the Exotic Vegetation Removal Plan as an appendix. The BTR is based on surveys of vegetation, plants and wildlife conducted in January 2002, May 2004, and April 2005.

5.3.1 Existing Conditions

Existing Vegetation Communities and Habitats

The project site supports seven naturalized vegetation communities: southern willow scrub, vernal pools, maritime succulent scrub, Diegan coastal sage scrub (including disturbed associations), southern maritime chaparral, southern mixed chaparral, and non-native grassland (Table 5.3-1, *Existing Vegetation Communities/Habitats*; Figure 5.3-1, *Vegetation and Sensitive Resources*); these vegetation communities are all considered sensitive because they have been depleted, are naturally uncommon, or support sensitive species. Sensitive habitats are either rare within the region or sensitive by California Department of Fish and Game (CDFG; Holland 1986), are listed as sensitive under the Multiple Species Conservation Program (MSCP; City 1997a) or the City's Biology Guidelines (2004h), or support sensitive plants or animals. In addition to these seven sensitive vegetation communities, disturbed habitat, ornamental vegetation, non-native vegetation and developed areas also occur on site and are not sensitive.

The vegetation communities and habitats observed on the project site are described below.

Table 5.3-1 EXISTING VEGETATION COMMUNITIES/HABITATS		
VEGETATION COMMUNITY	MSCP TIER	ACREAGE
Wetland/Riparian		
Southern willow scrub	--	0.12
Vernal pool	--	0.09
Uplands		
Maritime succulent scrub	I	0.30
Diegan coastal sage scrub	II	3.22
Diegan coastal sage scrub -- disturbed	II	1.96
Southern maritime chaparral	I	0.02

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Table 5.3-1 (cont.) EXISTING VEGETATION COMMUNITIES/HABITATS		
VEGETATION COMMUNITY	MSCP TIER	ACREAGE
Uplands (cont.)		
Southern mixed chaparral	IIIA	1.62
Non-native grassland	IIIB	0.03
Disturbed habitat	IV	0.62
Ornamental	IV	0.13
Non-native vegetation	IV	0.05
Developed	--	18.18
TOTAL		26.34

Source: HELIX 20087a

Uplands

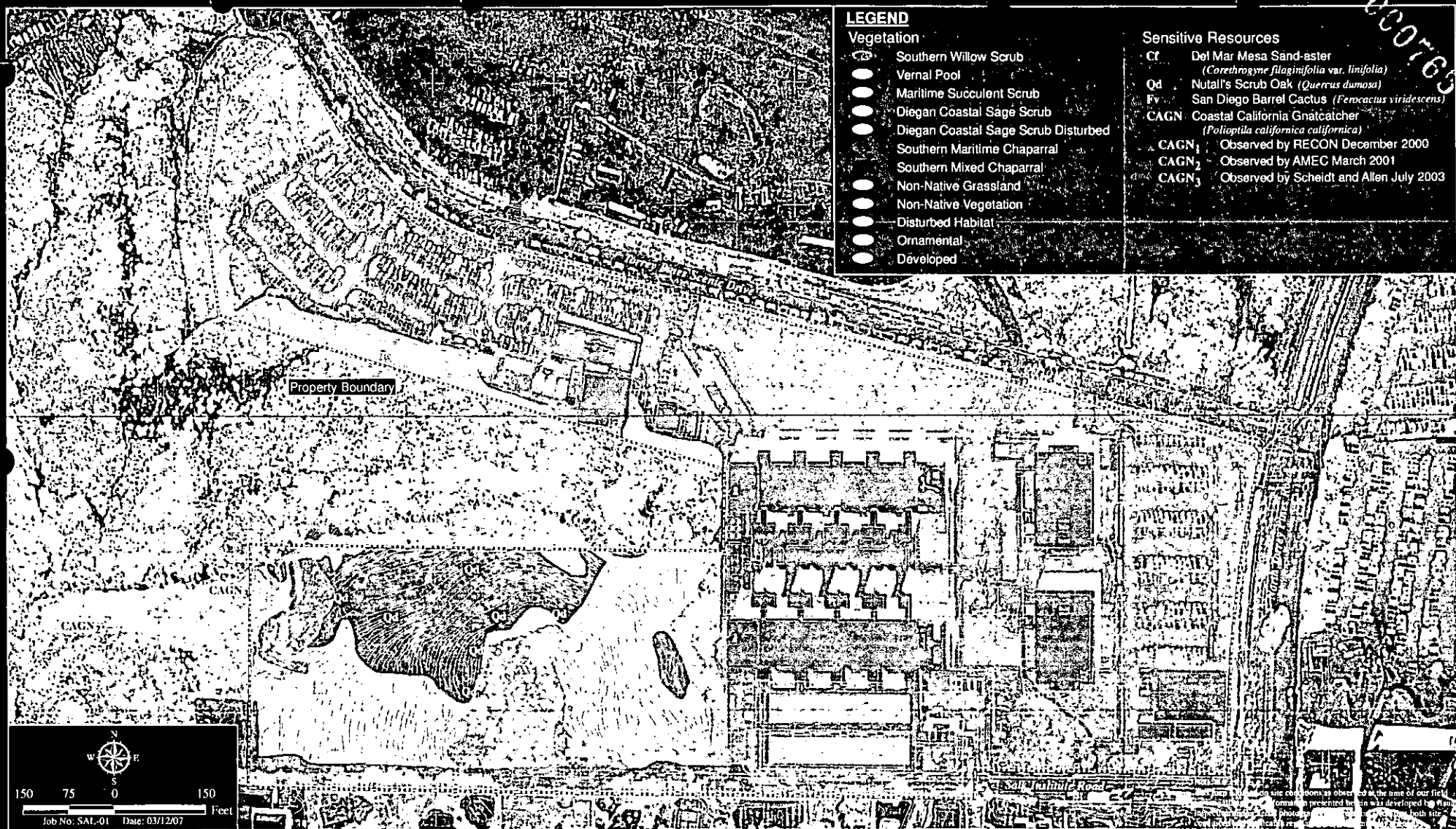
Maritime Succulent Scrub

Approximately 0.30 acre of maritime succulent scrub occurs in the northwestern section of the site (Figure 5.3-1). Maritime succulent scrub is a low, open scrub community dominated by a mixture of stem-and-leaf succulent and drought-deciduous species that also occur within sage scrub communities. This plant association occurs on thin rocky or sandy soils, on steep slopes of coastal headlands, and bluffs. Maritime succulent scrub is restricted to within a few miles of the coast from about Torrey Pines to Baja California, Mexico (Baja) and on San Clemente and Catalina islands. Maritime succulent scrub is considered a sensitive vegetation community by several resource agencies, including CDFG and the City. Maritime succulent scrub occupies the City's highest level of sensitivity (Tier.I) for upland habitats and requires mitigation for impacts.

Plant species observed within this vegetation community on site include San Diego barrel cactus (*Ferocactus viridescens*), lady-fingers (*Dudleya edulis*), chalk dudleya (*Dudleya pulverulenta*), coastal dudleya (*Dudleya lanceolata*), our Lord's candle (*Yucca whipplei*), boxthorn (*Lycium californicum*) and coast prickly pear cactus (*Opuntia littoralis*). Maritime succulent scrub also contains Diegan coastal sage scrub species such as California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*).

Diegan Coastal Sage Scrub (including disturbed)

Diegan coastal sage scrub is one of the two major shrub types that occur in California. This vegetation community type occupies xeric sites characterized by shallow soils. Coastal sage scrub species are drought-tolerant (leaves abscise during summer drought and are replaced by a lesser amount of



smaller leaves) and have relatively shallow root systems and open canopies. This adaptation of drought evasion allows these species to better withstand the prolonged drought period in the summer and fall in areas of low precipitation. Predominant species include California buckwheat, California sagebrush, black sage (*Salvia mellifera*), and lemonadeberry (*Rhus integrifolia*).

Disturbed Diegan coastal sage scrub contains many similar shrub species as undisturbed Diegan coastal sage scrub but is sparser and has a higher proportion of non-native annual species. The disturbed Diegan coastal sage scrub adjacent to the private driveway extending from Salk Institute Road on the southern mesa was revegetated by Salk Institute (Institute) for erosion control purposes after the area was used for construction staging for various building construction projects on site, including the construction of the original buildings. This area was not created as a mitigation site for prior project impacts and the conditions of approval for the prior permit approvals did not require this area to be revegetated. In addition to California sagebrush and California buckwheat, disturbed Diegan coastal sage scrub on site supports non-native species such as Russian thistle (*Salsola tragus*), nightshade (*Solanum* sp.), and red-stem filaree (*Erodium cicutarium*). Approximately 5.18 acres of Diegan coastal sage scrub (including disturbed) occur on site.

Southern Maritime Chaparral

Maritime chaparral is separated from southern mixed chaparral due to greater exposure to summer fog, humidity, and mild temperatures moderating drought pressures, potentially leading to adaptations to different disturbance regimes (Holland 1986). The City's Guidelines for Conducting Biological Surveys, Attachment II (City 2002c) provides information to distinguish southern maritime chaparral from southern mixed chaparral. Within these guidelines, the City has identified ten plant species as indicators of southern maritime chaparral; of these species, only Nuttall's scrub oak (*Quercus dumosa*) was observed on site during vegetation mapping. Approximately 0.02 acre of southern maritime chaparral occurs on site.

Southern Mixed Chaparral

Approximately 1.62 acres of southern mixed chaparral occur on the slopes and steep hillsides of the south mesa on site. Southern mixed chaparral is composed of broad-leaved, sclerophyllous shrubs that grow to between 6 and 10 feet tall and form dense, often impenetrable stands. This vegetation community occurs primarily on dry, rocky, often steep north-facing slopes with little soil. As conditions become more mesic, broad-leaved, sclerophyllous shrubs that resprout from underground root crowns become dominant. Plant species observed within this vegetation community on site include chamise (*Adenostoma fasciculatum*), toyon (*Heteromeles arbutifolia*), mission manzanita (*Xylococcus bicolor*), black sage, laurel sumac and Nuttall's scrub oak.

Non-native Grassland

Non-native grassland is characterized by a dense to sparse cover of exotic annual grasses and is often associated with numerous species of showy-flowered native annual forbs (Holland 1986). Most of the introduced annual species that comprise the majority of species and biomass within non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to that of southern California. Characteristic species within this vegetation community on site include wild oats (*Avena* spp.), foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*B. diandrus*), fescue (*Vulpia myuros*), and mustard (*Brassica* spp.). Although not as sensitive as native grasslands, non-native grasslands can support many of the same plant and animal species. Non-native grasslands also serve a valuable purpose as habitat for native rodents and foraging habitat for sensitive raptor species. One sensitive species occurs within the non-native grassland on site, Del Mar Mesa sand aster. Non-native grassland is found in a small 0.03-acre patch at the northwestern corner of the south mesa.

Disturbed Habitat

Disturbed habitats are either unvegetated or are predominated by non-native weedy species that are adapted to a regime of frequent disturbance. Weed species observed within the disturbed habitat on site consist of eucalyptus (*Eucalyptus* sp.), tamarisk (*Tamarix* sp.), hottentot-fig (*Carpobrotus edulis*), and common ripgut grass. On the project site, approximately 0.62 acre of disturbed habitat occurs adjacent to developed areas and at the western tip of the south mesa.

Ornamental

A small area totaling 0.13 acre of non-native ornamental landscaping is found in the southeast corner of the north mesa. This consists primarily of iceplant and Torrey pine planted trees.

Non-native Vegetation

Approximately 0.05 acre of non-native vegetation occurs on either side of the southern willow scrub on the south mesa of the project site. On site, this vegetation community is composed primarily of mats of non-native hottentot-fig. This vegetation community differs from ornamental areas because of the lack of on-site irrigation. It appears that iceplant used in the existing brush management easement adjacent to the existing Institute facility has spread into this area.

Developed

Developed areas on site totaling approximately 18.2 acres consist of Salk Institute Road along the southern site boundary, the current Institute facility to the north and east, and an access road to a City

drainage outfall in the northwest portion of the south mesa. Developed areas in the eastern side of the site also include, buildings, parking lots, lawns, ornamental landscaping, eucalyptus trees and planted Torrey pine trees.

Wetlands

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*). This vegetation community generally occurs on loose, sandy or fine gravely alluvium deposited near stream channels during flood flows. Southern willow scrub on site is dominated by arroyo willow (*Salix lasiolepis*). Approximately 0.12 acre of southern willow scrub occurs at the bottom of the canyon within the eastern end of the south mesa.

Vernal Pools

Vernal pools are a highly specialized habitat supporting a unique flora and fauna. Natural vernal pools are normally associated with two important physical conditions: a subsurface hardpan or claypan that inhibits the downward percolation of water, and topography characterized by a series of low hummocks (mima mounds) and depressions (vernal pools). These two physical conditions allow water to collect in the depressions during the rainy season. Water that has collected in vernal pools, however, gradually evaporates with the passing of the rainy season. Per the City's guidelines, water-holding basins that support one or more vernal pool plant indicator species (U.S. Army Corps of Engineers [Corps] 1997) are considered vernal pools. Fifteen vernal pools have been mapped on the western end of the north mesa on site, with indicator species that include plantain (*Plantago elongata*), pygmy weed (*Crassula aquatica*) and waterwort (*Elatine brachysperma*). These pools are located west of the existing parking lot on the north mesa in low areas between piles of soil dumped on site sometime before 1970. The vernal pools are of low to moderate quality and have a very low floral diversity and cover. As noted in Tables 5.3-2 and 5.3-3, the potential for listed vernal pool species (noted in the City's MSCP Subarea Plan) to occur on site is low. Wet and dry season surveys were conducted in 2004 for the San Diego fairy shrimp (*Branchinecta sandiegonensis*) ~~Riverside fairy shrimp (*Steptocephalus wootoni*)~~, the one vernal pool species with a moderate potential to occur and the Riverside fairy shrimp (*Steptocephalus wootoni*), which has a low potential to occur. ~~Those~~ Both wet and dry season surveys were negative for both species; none of the other listed vernal pool (i.e., Otay mesa mint [*Pogogyne nudiusscula*], California Orcutt grass [*Orcuttia californica*], San Diego button celery [*Eryngium aristulatum* ssp. *parishii*], San Diego mesa mint [*Pogogyne abramsii*], spreading navarretia [*Navarretia fossalis*], or San Diego fairy shrimp [*Branchinecta sandiegonensis*]), species have been observed on site during field surveys. An aerial photograph analysis conducted for the BTR shows that there is no evidence for naturally occurring vernal pools or historic

vernal pool topography as far back as 1928. Additionally, the underlying soils (sandy loams) do not naturally support vernal pool habitat due to the lack of a claypan or hardpan.

A portion of the untreated runoff on the northern peninsula currently sheet flows across the parking lot and empties into the vernal pool area through two riprap piles. The vernal pools in this area hold water for much of the year, even in the summer when naturally occurring vernal pools are dry. The extended period of inundation in these pools is likely due to the continued runoff from the adjacent development and the Institute parking lot. Were it not for the soil piles observed in 1970 and runoff from the parking lot, these vernal pools likely would not occur in this location. For these reasons, the vernal pools are not considered city wetlands, as discussed below under *Jurisdictional Areas*.

Jurisdictional Areas

Corps, RWQCB and CDFG Jurisdiction. The canyon bottom/drainage in the southwestern portion of the site, including the mapped patches of southern willow scrub habitat, may be Corps and CDFG jurisdictional Waters of the U.S./streambed or wetlands. Areas under Corps jurisdiction are also regulated by the Regional Water Quality Control Board (RWQCB). Vernal pools also exist on site. Since the vernal pools on site are isolated (per the U.S. Supreme Court decision in Solid Waste Agency of Northern Cook County [SWANCC] v. Corps) and man-made, they may not be under Corps jurisdiction.

City of San Diego Jurisdiction. Of the potential Corps and CDFG jurisdictional areas discussed above, only the southern willow scrub habitat meets the City's wetland definition. According to the City's Land Development Code Biology Guidelines (City of San Diego 1997d), in order for an area to be considered a City wetland, it must support naturally occurring wetland vegetation. Unvegetated streambeds in the canyon bottoms would not be considered City jurisdictional wetlands.

As stated in the Environmentally Sensitive Lands (ESL) regulations and Biology Guidelines, the City's wetland definition is intended to differentiate uplands from wetlands and naturally occurring wetlands from those created through human activity. It is not the intent of the City to regulate artificially created wetlands in historically non-wetland areas unless they have been delineated as wetlands by the Corps and/or CDFG. The 15 vernal pools mapped on site feature wetland vegetation, but are the result of human activity (i.e., soil dumping and parking lot runoff). The soils found on site are Gaviota fine sandy loam, terrace escarpments, and Chesterton fine sandy loam, which are not hydric and lack claypan or hardpan. The hydrology of the pools is not representative of naturally occurring pools in that they hold water for longer periods due to runoff from the adjacent parking lot. In addition, no natural vernal pool complexes have been mapped in the vicinity (City of San Diego 2004i). Because the vernal pools were created by human activity in a historically non-wetland area and are isolated (thus not Corps and/or CDFG jurisdictional), they are not considered City jurisdictional wetlands and are not subject to City wetland regulations and guidelines, such as the ESL.

Existing Sensitive Plant Species

A list of plant species observed on site is included in Appendix B of the BTR. The predominant plants on site are shrub components of the Diegan coastal sage scrub and southern mixed chaparral. Sensitive species are considered uncommon or limited in that they are (1) only found in the San Diego region, (2) a local representative of a species or association of species not otherwise found in the region, or (3) severely depleted within their ranges or within the region. Four sensitive plant species were observed on site, as depicted in Figure 5.3-1: Nuttall's scrub oak (*Quercus dumosa*), Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*), Torrey pine (*Pinus torreyana*), and San Diego barrel cactus (*Ferocactus viridescens*).

Nuttall's scrub oak (*Quercus dumosa*)

Listing: /--; CNPS List 1B.1

Distribution: San Diego, Orange, and Santa Barbara counties in California; Baja

Habitat(s): Chaparral, coastal scrub with sandy or clay loam soils.

Status on site: Nuttall's scrub oak was observed within the Diegan coastal sage scrub and southern mixed chaparral on site.

Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)

Listing: --/--; CNPS List 1B.1; CA Endemic

Distribution: San Diego County

Habitat(s): Perennial herb occurring in chaparral and coastal sage scrub.

Status on site: Several individuals were observed within the non-native grassland onsite.

Torrey pine (*Pinus torreyana*)

Listing: /--; CNPS List 1B.2; CA Endemic

Distribution: Species types occur in only two locations: along the coast near Del Mar (*P. torreyana* spp. *torreyana*) and on the Santa Rosa Island (*P. torreyana* ssp. *insularis*).

Habitat(s): Torrey pine woodlands/forest and southern maritime chaparral.

Status on site: Torrey pine trees have been planted within the ornamental landscape south of Torrey Pines Scenic Drive. None of these trees are indigenous to the project site but rather were added as part of the ornamental landscape. In addition, the genetic make-up of these individuals is unknown.

San Diego barrel cactus (*Ferocactus viridescens*)

Listing: --/--; CNPS List 2.1; MSCP Covered

Distribution: San Diego County and Baja

Habitat(s): Dry slopes in coastal sage scrub and chaparral.

Status on site: Found on slopes within coastal sage scrub and maritime succulent scrub.

Other sensitive plant species not observed at the time of HELIX's survey that may have potential to occur on site are listed in Table 5.3-2, *Listed or Sensitive Plant Species with Potential to Occur*. None of the City's 15 narrow endemic species were observed on site during surveys and their potential to occur is low, with the exception of short-leaved dudleya (*Dudleya blochmaniae* spp. *brevifolia*), which has a moderate potential to occur, but was not observed during field surveys.

Table 5.3-2 LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
San Diego county needlegrass (<i>Achnatherum diegoense</i>)	--/-- CNPS+ List 4.2	Low. Often found in more wet areas in chaparral and coastal sage scrub and on clay slopes.
San Diego sagewort (<i>Artemisia palmeri</i>)	--/-- CNPS List 4.2	Low. Occurs along stream courses, often within coastal sage scrub and southern mixed chaparral.
South coast saltscale (<i>Atriplex pacifica</i>)	--/-- CNPS List 1B.2	Moderate. <u>Xeric, often mildly disturbed locales of coastal bluff scrub. Usually the surrounding habitat is an open Diegan coastal sage scrub, although it is found on alkaline flats in areas devoid of taller shrubs.</u>
Seaside calandrinia (<i>Calandrinia maritima</i>)	--/-- CNPS List 4.2	High. Occurs in sandy places and on sea bluffs in coastal bluff scrub, valley, and foothill grassland. Suitable habitat present. Species observed in previous survey (Scheidt 2003).
Wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	--/-- CNPS List 2.2 MSCP Covered	Moderate. Shrub occurring in chaparral.
Orcutt's spineflower (<i>Chorizanthe orcuttiana</i>)	FE/SE CNPS List 1B.1 CA Endemic	Moderate. Found in sandy areas on mesas in the coastal region. Generally associated with coastal sage scrub or chaparral. Would have been observed during focused rare plant surveys if present on site.
Summer holly (<i>Comarostaphylos diversifolia</i> ssp. <i>diversifolia</i>)	--/-- CNPS List 1B.2	Moderate. Shrub occurring in chaparral.
Orcutt's bird-beak (<i>Cordylanthus orcuttianus</i>)	--/-- CNPS List 2.1 MSCP Covered	Low. May occur in coastal sage scrub.
Sea dahlia (<i>Coreopsis maritima</i>)	--/-- CNPS List 2.2	Moderate. May occur on coastal bluffs in coastal sage scrub.

Table 5.3-2 (cont.) LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
Western dichondra (<i>Dichondra occidentalis</i>)	--/-- CNPS List 4.2	Moderate. Perennial herb occurring in chaparral, coastal sage scrub, and valley and foothill grasslands. May occur in dense Diegan coastal sage scrub, especially after fire events. Suitable habitat present.
Orcutt's dudleya (<i>Dudleya attenuata</i> ssp. <i>orcuttii</i>)	--/-- CNPS List 2.1	Low. Occurs in chaparral and coastal sage scrub. Would have been observed if present.
Blochman's dudleya (<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>)	--/-- CNPS List 1B.1	Low. Occurs in dry, stony places associated with coastal sage scrub.
Coast wallflower (<i>Erysimum ammodophilum</i>)	--/-- CNPS List 1B.2 CA Endemic MSCP Covered	Low. Coastal dune strand species.
Cliff spurge (<i>Euphorbia misera</i>)	--/-- CNPS List 2.2	Moderate. Occurs on sea bluffs in coastal sage scrub.
Palmer's grapplinghook (<i>Harpagonella palmeri</i>)	--/-- CNPS List 4.2	Low. Prefers clay soils in chaparral, coastal sage scrub, and grasslands.
San Diego goldenstar (<i>Muilla clevelandii</i>)	--/-- CNPS List 1B.1 MSCP Covered	Low. Perennial herb occurring in chaparral, coastal sage scrub, valley and foothill grasslands, and vernal pools.
Parry's tetraococcus (<i>Tetraococcus dioicus</i>)	--/-- CNPS List 1B.2 MSCP Covered	Low. Found in coastal sage scrub and chaparral.
San Diego County viguiera (<i>Viguiera laciniata</i>)	--/-- CNPS List 4.2	High. Occurs in coastal sage scrub.

*Refer to Appendix D of the BTR for a listing and explanation of status and sensitivity codes.

+ CNPS = California Native Plant Society

Source: HELIX 2007-2008.

Existing Sensitive Animal Species

A complete list of animal species observed on site is presented in Appendix C of the BTR. The coastal California gnatcatcher was observed on site in previous surveys (RECON 2000a and 2000b, AMEC 2001, and Scheidt 2003) and confirmed present during the most recent fieldwork. No other sensitive animal species were observed on site during the surveys; however, several sensitive animal species have the potential to occur (Table 5.3-3, *Listed or Sensitive Animal Species with Potential to Occur*).

Coastal California gnatcatcher (*Poliophtila californica californica*)

Status: FT/SSC; MSCP Covered

Distribution: Southern Los Angeles, Orange, western Riverside, and San Diego counties south into Baja.

Habitat(s): Coastal sage scrub

Status on site: Individuals seen and heard in coastal sage scrub slopes at north mesa, near the Institute parking lot by HELIX in 2004. Scheidt (2003) reported a coastal California gnatcatcher immediately off site to the west on the southern mesa. AMEC (2001) reported detecting a coastal California gnatcatcher on the southern mesa. RECON (2000a and 2000b) reported a coastal California gnatcatcher on the northern mesa. Figure 5.3-1 depicts these sightings.

Table 5.3-3 LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
INVERTEBRATES		
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	FE/--	Low. Outside of the U.S. Fish and Wildlife Service (USFWS) protocol survey area.
Hermes copper (<i>Lycaena hermes</i>)	--/--	Low. Food plant (<i>Rhamnus crocea</i>) not found in Diegan coastal sage scrub.
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	FE/-- MSCP Covered	Moderate. Fairy shrimp are known to occur in vernal pools and disturbed basins throughout San Diego County. Wet and dry season surveys for this species in water-holding basins on site during 2004 were negative.
Riverside fairy shrimp (<i>Streptocephalus woottoni</i>)	FE/-- MSCP Covered	Low. This species typically occurs in basins greater than 10 inches in depth, and the basins on site are less than 10 inches deep. Wet and dry season surveys for this species in water-holding basins on site during 2004 were negative.
VERTEBRATES		
Reptiles		
San Diego horned lizard (<i>Phrynosoma coronatum blainvillii</i>)	--/SSC <u>MSCP Covered</u>	Moderate. Occurs in chaparral, coastal sage scrub, and open oak woodlands and coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (<i>Pogonomyrmex</i> sp.), a primary prey item.

Table 5.3-3 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Reptiles (cont.)		
Orange-throated whiptail (<i>Cnemidophorus hyperythrus beldingi</i>)	--/ESSC MSCP Covered	Moderate <u>High</u> . Occurs in coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant invertebrate prey base, particularly termites (<i>Reticulitermes</i> sp.).
Coastal western whiptail (<i>Cnemidophorus tigris multiscutatus</i>)	--/--	Moderate. Occurs in open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites.
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	--/ESSC	Moderate. Occurs in washes, beaches, alluvial fans, scrublands, and oak woodlands. Important habitat components include loose soil and leaf-litter, adequate soil moisture, warmth, and an abundance of invertebrate prey.
Northern red diamond rattlesnake (<i>Crotalus exsul</i>)	--/ESSC	Moderate. Favors rocky outcrops in coastal sage scrub, chaparral, creosote bush scrub, and areas dominated by cactus. Also encountered along rocky canyon bottoms and on the flats adjacent to rocky, desert foothills.
Western spadefoot toad (<i>Spea hammondi</i>)	--/ESSC	Moderate. Breeds in vernal pools and may be found in burrows within coastal sage scrub habitats.
Birds		
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE, BCC/SE MSCP Covered	Low. A small (0.12 acre) isolated patch of southern willow scrub occurs on site.
Southwestern willow flycatcher (<i>Empidonax trailii extimus</i>)	FE/-- MSCP Covered	Low. A small (0.12 acre) isolated patch of southern willow scrub occurs on site.
Cooper's hawk (<i>Accipiter cooperi</i>)	Nesting; -- /WLESC MSCP Covered	Moderate. Inhabits lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields.
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	--/WLESC MSCP Covered	High. Found in coastal sage scrub, where it occurs on rocky hillsides and in canyons, but also may be found in open sage scrub/grassy areas of successional growth (for example, after a fire).

Table 5.3-3 (cont.)
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Birds (cont.)		
Bell's sage sparrow (<i>Amphispiza belli belli</i>)	FE /BCC/WL MNBMC	Moderate. Occurs in sunny, dry stands of coastal sage scrub and chaparral. Would likely have been detected if present.
Northern harrier (<i>Circus cyaneus</i>)	Nesting; FE /SSC MSCP Covered	Low. Occurs in coastal, salt and freshwater marshlands; grassland; and prairies.
White-tailed kite (<i>Elanus leucurus</i>)	Nesting; FE / Fully Protected MNBMC	Low. Nesting typically occurs in riparian or oak woodlands adjacent to grassland where small mammals are hunted.
California horned lark (<i>Eremophila alpestris actia</i>)	FE /WL/ES	Low. Occurs in sandy beaches, agricultural fields, grasslands, and open areas.
Merlin (<i>Falco columbarius</i>)	FE /WL/ES	Moderate. Fairly common visitor to coastal areas of San Diego County in winter. The site is limited to potential use as foraging habitat.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	BCC/SE, Fully Protected MSCP Covered	Moderate. Generally, areas with cliffs near water where prey (shorebirds and ducks) is concentrated. Preferred hunting areas are agricultural fields, meadows, marshes, and lakes. Nesting usually occurs on cliff ledges or in a scrape in debris and occasionally in the old nests of other birds.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	FE /SSC MNBMC	Moderate. Occurs in open habitats including grasslands, scrublands, and ruderal areas with adequate perching locations.
Mammals		
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	FE /SSC	Moderate to high. Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.
Pacific little pocket mouse (<i>Perognathus longimembris pacificus</i>)	FE/SSC	Low. Occasionally found in coastal sage scrub but prefers sandy soils. Only three populations are known to be extant: one at the Dana Point Headlands in Orange County and two on Camp Pendleton in San Diego County. Previous protocol survey on property produced negative results (AMEC 2000). Appropriate habitat occurs on site, but slopes are steep and habitat isolated for viable or probable population to exist.

Table 5.3-3 (cont.) LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR		
SPECIES	STATUS*	EVALUATION OF POTENTIAL TO OCCUR
VERTEBRATES (cont.)		
Mammals (cont.)		
Dulzura California pocket mouse (<i>Chaetodipus californicus femoralis</i>)	--/ESSC	Low to moderate. Occurs in dense chaparral but occasionally in other shrublands.
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	--/ESSC	Low to moderate. Occurs in coastal sage scrub and ruderal areas, often in sandy washes.
Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	--/ESSC	Moderate. Could occur in all arid habitats including all shrublands.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	--/ESSC	Moderate. Occurs in coastal sage scrub and other xeric habitats.
Greater western mastiff bat (<i>Eumops perotis californicus</i>)	--/ESSC	Moderate. Could forage in any habitat on site, but roosting sites are likely elsewhere.
Pallid bat (<i>Antrozous pallidus pacificus</i>)	--/ESSC	Moderate. Could forage throughout the site, but roosting sites are likely elsewhere.
Southern mule deer (<i>Odocoileus hemionus fuliginatata</i>)	--/-- MSCP Covered	Low. Occurs in coastal sage scrub, riparian, and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.

*Refer to Appendix D of the BTR for a listing and explanation of status and sensitivity codes.

FE = federally endangered; CSC = California Species of Concern;

Source: HELIX 2007+2008.

Regional and Regulatory Context

Locally, the significance of biological resources occurring within a project site are assessed based on the species' or habitats' importance to the region as a whole, relative quality of the resources, and degree of connection with larger open space or preserved areas.

Wildlife Corridors/Linkages

One of the primary objectives of the MSCP is to maintain a preserve system that allows plants and animals to maintain their existence at both local and regional levels. This preserve system, called the ~~Multiple Habitat Planning Area (MHPA)~~, is a network composed of core biological resource areas (large blocks of habitat) and linkages/wildlife corridors. Approximately 0.32 acre of the project site is

within the MHPA. The area contains a parking lot and a small, south-facing slope above an off-site canyon and does not function as a large block of habitat or regional or local wildlife corridor.

MSCP Evaluation

The City's MSCP Subarea Plan was prepared to meet the requirements of the California Natural Communities Conservation Planning (NCCP) Act of 1992. This Subarea Plan is consistent with the MSCP and describes how the City's portion of the MSCP Preserve, the MHPA, would be implemented. This section provides a description of the MHPA in the study area as well as MSCP guidelines and directives (City 1997a, b) with which the proposed project must show consistency.

MHPA Preserve

The MSCP identifies a MHPA that is intended to link all core biological areas into a regional wildlife preserve. The project site is located within the Northern Area of the City's MSCP Subarea Plan. Approximately 0.32 acre of the MHPA occurs on the northwest mesa (see Figure 4.3-1), and contains maritime succulent scrub, Diegan coastal sage scrub, disturbed habitat and developed land. MHPA also occurs off site west of the Institute property and between the two western mesas on site. As a result of the MHPA designation on site and immediately off site, the MSCP Land Use Adjacency Guidelines are applicable to the project. The adjacency guidelines address habitat insularization, drainage/toxins, lighting, noise, barriers, brush management/invasive species, and grading/development.

Specific Management Directives

The MSCP Subarea Plan does not include any specific management policies or directives that pertain to the subject property.

Special Conditions for MSCP Covered Species

Impacts to most species covered by the MSCP are considered to be mitigable through appropriate habitat preservation within the MHPA preserve. While this is true for species with wide geographic distributions, certain species with very limited geographic ranges would require additional conservation measures to assure their long-term survival (City 1997a). These species are referred to as "narrow endemics" in the MSCP and have additional conditions placed upon them. For narrow endemic species outside of the MHPA, the following protection measures would apply as appropriate: (1) avoidance, (2) management, (3) enhancement, and/or (4) transplantation to areas identified for preservation. No narrow endemic species were observed on site and the potential for narrow endemics to occur on site is considered low to moderate.

City of San Diego ESL

In July 1997, the USFWS, CDFG, and City entered into the Implementing Agreement for the MSCP (City of San Diego 1997b), which allows the incidental take of threatened and endangered species as well as regionally sensitive species that it aims to conserve (i.e., covered species). The MSCP designates regional preserves intended to be mostly void of development activities, while allowing development of other areas subject to the requirements of the program. The study area is located within and adjacent to the MHPA. The mitigation requirements for sensitive resources discussed in this document follow the requirements of the City's Biology Guidelines (City of San Diego 1997d) as outlined in the City's ESL ordinance (2001). The purpose of the ESL ordinance is to "protect, preserve and, where damaged restore, the environmentally sensitive lands of San Diego and the viability of the species supported by those lands." Environmentally sensitive lands are defined to include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs and 100-year floodplains. Within the Coastal Overlay Zone, the applicant must provide a minimum 100-foot buffer from City wetlands, unless a lesser or greater buffer is warranted as determined through the process described in 143.0141(a) of the SDMC.

5.3.2 Impacts

Because the applicant has decided to eliminate the daycare facility and temporary housing quarters from the Salk Institute Master plan, and this minor project modification would substantially reduce project impacts to biological resources, the following analysis has been revised to reflect the updated analysis contained in the latest biological technical report (HELIX 2008a).

Significance Criteria

The City evaluates significance of impacts to biological resources in several ways. First, all projects are evaluated through the CEQA process. Guidelines for determining significance of impacts under CEQA and mitigation requirements for these impacts are based in large part on the City's Significance Determination Thresholds (2004d). According to these thresholds, a proposed project would have a significant impact on biological resources if the project would:

- Substantially affect an endangered, rare, or threatened species of animal or plant or the habitat of the species;
- Interfere substantially with the movement of the any resident or migratory fish or wildlife species; or
- Substantially diminish habitat for fish, wildlife or plants.

In addition to the CEQA review process, City staff also review impacts to biological resources under the ESL regulations, and evaluate the project's consistency with City's MSCP Subarea Plan. The ESL regulations require that development avoid impacts to sensitive biological habitats as much as possible. These habitats include all MHPA lands, wetlands and vernal pools in naturally occurring complexes, listed non-covered species habitat, and narrow endemics. The MSCP provides guidance for determining significance of impacts to biological resources on a regional basis. The MSCP program was developed and agreed to by the USFWS and CDFG and thus represents policy for biological resource regulations that combines federal, state and local regulations.

A direct impact occurs when the primary effects of a project replace existing habitat with graded or developed areas. An indirect impact consists of secondary effects of a project, including habitat insularization, edge effects, exotic species invasion, vehicular noise, and increased human or pet intrusion. The magnitude of an indirect impact can be the same as a direct impact; however, the effects from an indirect impact usually take longer to become apparent.

It should be noted that native upland habitat impacts totaling less than 0.1 acre, and wetland habitat impacts totaling less than 0.01 acre are not considered significant and do not require mitigation. Additionally, an impact totaling less than 1.0 acre to non-native grasslands that are completely surrounded by existing urban development is not considered significant and does not require mitigation.

Issue 1: Would the proposed project result in a reduction in the number of any unique, rare, endangered, sensitive, or fully protected species of plants or animals?

Sensitive Plant Species

No federally or state listed or MSCP narrow endemic species were observed on site. As discussed above, four sensitive plant species were observed on site. No Direct impacts to sensitive plant species would occur, to several Nuttall's scrub oaks (Figure 5.3-2, Vegetation and Sensitive Resources/Impacts). Impacts to this species are not considered significant, however, due to their low level of sensitivity, low numbers of individuals impacted, and amount of species preservation proposed. No impacts to MSCP-covered vernal pool indicator plant species are anticipated.

The proposed project would result in impacts to an area currently planted with Torrey pine trees that were included in the ornamental landscape. These trees are not considered sensitive since they were planted as part of the urban landscape and their genetic make-up is unknown. It is noted that the Landscape plan-Design Guidelines proposes to preserve in place or remove and relocate all these trees to other areas within the developed portions of the project site, and additional Torrey pines would be added within landscape areas on site adjacent to the proposed Salk Community Center Building. Therefore, no adverse impacts to this species would occur.

The proposed brush management regulations discussed below under Issue 3 would extend Brush Management Zone 2 to 65 feet, potentially impacting San Diego barrel cactus found in maritime succulent scrub and coastal sage scrub habitats on site. Care would be taken to avoid removal of sensitive plant species within Zone 2 brush management areas through the implementation of fuel modification requirements outlined in the proposed Habitat Management Plan (HMP), including tagging the two or three individuals present within the Zone 2 area. No significant impacts to these plant species would occur.

Sensitive Animal Species

~~Implementation of the proposed project, specifically the daycare facility and housing units, would impact a portion of the coastal California gnatcatcher territory on the south mesa situated outside the City's MHPA. Minor grading and Zone 1 brush management would also impact a small part portion (0.05 acre) of coastal California gnatcatcher territory on the north mesa situated outside the City's MHPA. This impact is not considered significant based on City guidelines. In addition, implementation of the proposed project could potentially impact raptor nesting habitat outside the MHPA through the removal of eucalyptus trees in the eastern and southern portions of the site (i.e., near the proposed Torrey East Building and greenhouses). These impacts would be significant.~~

Significance of Impact

As described above, no significant direct impact to unique, rare, endangered, sensitive, or fully protected species of plants would occur. ~~Potential~~ No significant direct impacts to coastal California gnatcatcher territories would occur inside or outside the MHPA. Incidental take of the gnatcatcher is covered by the MSCP Implementing Agreement, however, and is permitted outside the MHPA. ~~In addition,~~ Potential direct impacts could occur to nesting raptors outside the MHPA, however, ~~Indirect indirect~~ impacts to coastal California gnatcatcher and raptors are addressed under Issue 5.

Mitigation Measures, Monitoring and Reporting Program

~~Since n~~ No federally or state listed or MSCP narrow endemic species were observed on site and, none of the four sensitive plant species that were observed on site only the Nuttall's scrub oak would be impacted. Therefore, ~~no species-specific mitigation measures are required. The naturally occurring sensitive plant species (i.e., Nuttall's scrub oak, Del Mar Mesa sand-aster and San Diego barrel cactus) would be preserved in place on site. Less than significant impacts to the Nuttall's scrub oak would be offset through on-site preservation and implementation of southern mixed chaparral mitigation discussed below under Issue 3.~~

~~Direct impacts to coastal California gnatcatchers (an MSCP-covered species) would be mitigated through Diegan coastal sage scrub mitigation discussed under Issue 3. The remaining animal species on site are of low sensitivity and/or are covered by the MSCP. No specific mitigation measures are required for~~

~~impacts to other sensitive animals on site.~~ Impacts to 0.05 acre of coastal California gnatcatcher territory outside the MHPA within the project boundaries are not considered significant based on the City's significance guidelines.

The following mitigation is required to reduce project impacts to nesting raptors to below a level of significance.

5.3-1 If removal of any eucalyptus trees or other trees used by raptors for nesting within the development area for the Torrey East Building and greenhouses is proposed during the raptor breeding season (February 1 through September 15), a qualified biologist shall ensure that no raptors are nesting in such trees, to the satisfaction of the Mayor/Environmental Designee. If construction occurs during the raptor breeding season, a pre-construction survey shall be conducted and no construction shall occur within 300 to 500 feet of any occupied nest(s) until the young fledge. Should the biologist determine that raptors are nesting, the trees shall not be removed until after the breeding season.

Mitigation for indirect impacts to the coastal California gnatcatcher is discussed under Issue 5.

Issue 2: Would the proposed project result in interference with the nesting/foraging/movement of any resident or migratory fish or wildlife species?

The removal of approximately ~~1.83~~0.08 acres of native habitat ~~could~~would have a less than significant impact on potentially impact nesting and foraging activity of wildlife species on the site. ~~However, w~~While the project site contains 0.32 acre of MHPA, as discussed above under Section 5.3.1, Existing Conditions~~above~~, the site does not constitute a large block of habitat and does not function as a wildlife corridor. In addition, ~~3.22~~1.27 net acres of habitat (i.e., maritime succulent scrub, Diegan coastal sage scrub [including disturbed], vernal pools, and disturbed habitat) would be added to the existing adjacent MHPA, improving opportunities for protected nesting, foraging and movement of wildlife species.

Temporary construction could potentially result in interference with nesting, foraging, or the movement of resident or migratory wildlife species, due to construction noise as discussed under Issue 5. Birds and other species may be temporarily displaced from the vicinity of the construction area but would be expected to return following grading.

Significance of Impact

The proposed project would not affect nesting/foraging wildlife species. As such, ~~however,~~ direct impacts would not be significant because the project would comply with the MSCP Subarea Plan. ~~f~~Furthermore, the site does not constitute a large block of habitat and does not function as a wildlife corridor. Potentially significant indirect impacts are discussed under Issue 5.

Mitigation Measures, Monitoring and Reporting Program

No significant direct impacts were identified; therefore, no mitigation is needed. Mitigation measures associated with indirect impacts are addressed under Issue 5.

Issue 3: Would the proposed project result in an impact to a sensitive habitat, including, but not limited to streamside vegetation, oak woodland, vernal pools, wetland, coastal sage scrub or chaparral?

The following analysis discusses the direct impacts associated with the proposed project. Indirect impacts are discussed under Issue 5.

Upland Habitat

Proposed grading and brush management (Zone 1) would directly impact ~~11.348.98~~ acres of the project site, including ~~1.830.08~~ acres of sensitive upland habitat. These impacts to native habitat would consist of approximately ~~0.0304~~ acre of maritime succulent scrub, and ~~1.540.05~~ acres of Diegan coastal sage scrub (including disturbed); and ~~0.25~~ acre of southern mixed chaparral (Table 5.3-4, *Project Impacts*) and are not considered significant based on the City's significance guidelines. Impacts to ~~9.51~~ 8.90 acres of disturbed, ornamental and developed land are not considered significant. No impacts to on-site wetlands or riparian habitats, such as vernal pools, southern willow scrub, or jurisdictional areas would occur.

The City Council adopted a change in the San Diego Municipal Code (SDMC) that increases the brush management requirements at the development interface with open space, wherein Zone 1 increases to 35 feet and Zone 2 increases to 65 feet for a total brush management zone of 100 feet. This code change became effective at the end of September 2005, except for land within the Coastal Zone (which includes the Institute property) where Coastal Commission approval of the code change (in the form of a Local Coastal Program [LCP] Amendment) is still required. The timing for Coastal Commission approval of the LCP Amendment is not known at this time. If the new regulations are adopted in the Coastal Zone prior to project approval, direct and indirect impacts to sensitive habitats on site would increase for both Zones 1 and 2. The proposed brush management regulation revision would increase direct project impacts ~~from within Zone 1 by 0.01 acre of southern mixed chaparral and 0.05 acre of Diegan coastal sage scrub (including disturbed), and by 0.01 acre of maritime succulent scrub (Table 5.3-5, *Additional Brush Management Impacts Associated with Proposed Land Development Code Revision and Local Coastal Program Amendment*).~~ The potential increase in the width of the Zone 2 brush management area would impact approximately ~~1.60.64~~ additional acres of sensitive habitat on and off site, including 0.01 acre of vernal pool, 0.9-0.34 acre of Diegan coastal sage scrub (including disturbed), and 0.273 acre of maritime succulent scrub, which are sensitive habitats, and 0.02 acre of disturbed habitat and 0.4 acre of southern mixed chaparral (see Figure 5 in Appendix B to

000783 this EIR). The majority of these impacts would occur ~~outside~~ inside the MHPA. Alternative compliance could be used to reduce the widths of the brush management zones and, therefore, reduce the severity of these potentially significant impacts. Alternative compliance determinations are based on the Fire Department's judgments about the defensibility of structures based on specific site and project characteristics. Because the proposed buildings would be constructed of concrete, which would provide a higher level of fire protection than wood structures, a reduction in the 100-foot brush management zone width may be justifiable while maintaining a level of fire protection that is functionally equivalent to the proposed regulations. ~~The~~ Nonetheless, the City of San Diego concluded that implementation of the brush management regulations contained in the LCP Amendment would cause significant and unmitigable impacts to non-covered species outside the MHPA (City of San Diego 2004i).

Table 5.3-4 PROJECT IMPACTS		
VEGETATION COMMUNITIES/HABITAT	MSCP TIER	IMPACTS (acre[s])*
Maritime succulent scrub	I	0.03**
Diegan coastal sage scrub	II	0.01
Diegan coastal sage scrub – disturbed	II	0.04
Disturbed habitat	IV	0.17
Ornamental	IV	0.09
Developed	--	8.64
TOTAL		8.98

*Impact numbers include Brush Management Zone 1 impact acreages. Given that Brush Management Zone 2 is considered impact neutral, impact numbers are not quantified.

**Impacts to 0.03 acre of maritime succulent scrub include less than 0.01 acre (i.e., 100 sf) within the on-site existing open space easement.

Source: HELIX 2008

If the California Coastal Commission concludes that Zone 2 brush management impacts proposed by the LCP Amendment are significant and should require mitigation, either avoidance would be incorporated into the final brush management plan or compensation could take the form of increased on-site habitat preservation using ratios per habitat type identified in the City of San Diego Biology Guidelines (or agreed upon by the California Coastal Commission) and/or contribution to the City's habitat acquisition fund. The City would be responsible for identifying and imposing mitigation requirements on the proposed project, at such time in the future when the LCP Amendment is adopted and applied to the proposed project. Alternatively, the City could adopt an alternative compliance brush management plan that avoids any intrusion into the MHPA while providing fire protection that is functionally equivalent to the 100-foot brush management zone contained in the proposed regulations.

Indirect impacts of brush management (i.e., loss of habitat value and introduction of invasive species) are addressed under Issue 5 of this section.

Table 5.3-5 ADDITIONAL BRUSH MANAGEMENT IMPACTS ASSOCIATED WITH PROPOSED LAND DEVELOPMENT CODE REVISION AND LOCAL COASTAL PROGRAM AMENDMENT		
VEGETATION COMMUNITIES/HABITAT	TIER	ZONE 1
Maritime succulent scrub	I	0.01
Diegan coastal sage scrub	II	0.04--
Diegan coastal sage scrub – disturbed	II	0.01--
Southern mixed chaparral	IIIA	0.01--
Disturbed habitat	IV	--
Ornamental	IV	--
Developed	--	--
TOTAL		0.0701*

*Additional impact totals do not include proposed brush management areas under existing fuel modification standards or Zone 2 (which is impact neutral not allowed in the MHPA under the proposed City policy); Zone 2 brush management would not occur in the MHPA if the proposed Land Development Code revision were certified by the CCC.

Source: HELIX 2007-2008

Wetland Habitat

The proposed project would not directly impact (i.e., through grading) any naturally occurring wetland habitat. Project grading and site development would respect the 100-foot wetland buffer required around wetland habitat in the Coastal Zone (per the ESL regulations) by not coming closer than 100 feet of the southern willow scrub in the southwestern portion of the site. (See Figure 5.3-2 for a graphic depiction of the proposed limits of grading and 100-foot wetland buffer.) The majority of development would occur much farther than 100 feet away from the wetland habitat. Development on the northern portion of the site would occur on the existing parking lot and would not result in any direct impacts to the adjacent vernal pools and surrounding native habitats. Currently, the parking lot on the north mesa is approximately 15 feet away from the nearest vernal pool. The project would replace a portion of the parking lot directly adjacent to the vernal pools with a vegetated, rock-lined drainage swale. The swale would improve the quality of the water entering the pools by treating runoff, and would increase the buffer between development and the nearest pool from 15 to 40-50 feet. The proposed buffer would be sufficient because the vernal pools are not naturally occurring City wetlands and the proposed buffer would improve the quality of the adjacent vernal pool habitat as discussed further under Issue 5 below.

Significance of Impact

Direct project impacts to ~~0.04-0.03~~ acre of Tier I habitat (maritime succulent scrub) and ~~1.54-0.05~~ acres of Tier II habitat (Diegan coastal sage scrub [including disturbed]) and ~~0.25~~ acre of Tier IIIA habitat (~~southern mixed chaparral~~) are not considered significant because the proposed project would impact less than 0.1 acre of sensitive habitats (i.e., 0.08 acre). Impacts to ~~9.54~~8.90 acres of Tier IV habitats (disturbed, ornamental and developed) are not significant because these habitats are not sensitive. No significant impacts to wetland habitats are assessed.

Mitigation Measures, Monitoring and Reporting Program

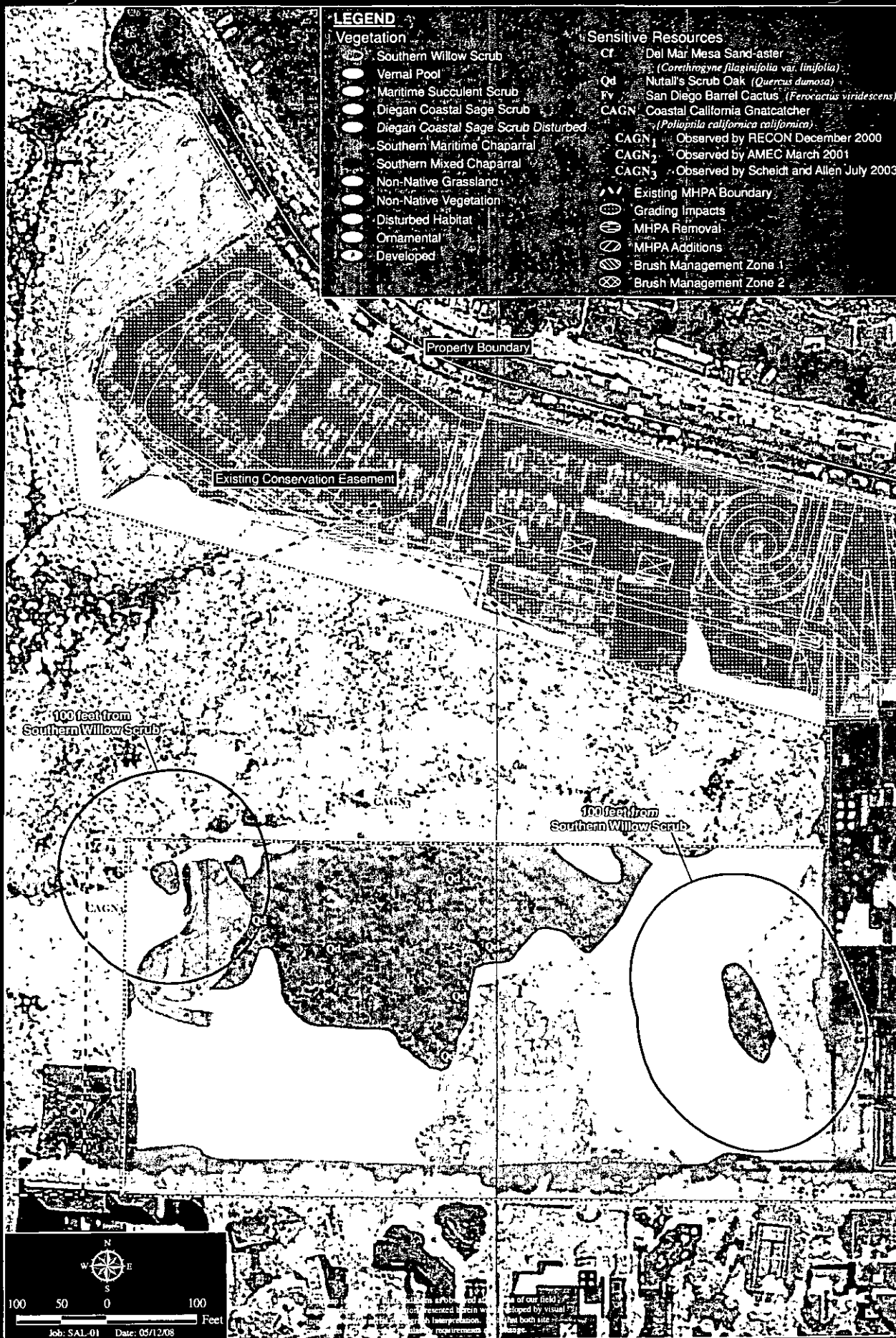
As stated above, direct impacts to 0.08 acre of native habitat are not considered significant under City significance guidelines. Therefore, no mitigation is required. Because habitat would be transferred to the MHPA, as discussed under Issue 4, a mitigation measure regarding the HMP funding is required and is provided below under Issue 4.

~~All direct impacts to sensitive habitats (Tiers I through IIIB) require mitigation. Mitigation is proposed to occur through both on-site preservation and the appropriate contribution to the Habitat Acquisition Fund (Table 5.3-6, Mitigation Requirements). A total of approximately 5.53 acres of habitat would be preserved on site. A net 3.22 acres is proposed to be added to the MHPA preserve. Preserved habitats include Diegan coastal sage scrub (including disturbed), southern maritime chaparral, southern mixed chaparral, non-native grassland, southern willow scrub, and vernal pools. Approximately 1.72 acres of the preserved area in the MHPA would be used for mitigation.~~

~~The following mitigation is required to reduce project impacts to sensitive upland habitats to below a level of significance:~~

~~5.3-2 Prior to issuance of any grading permit which would allow the disturbance of maritime succulent scrub, the project applicant shall preserve, to the satisfaction of the Mayor/Environmental Designee, 0.01 acre of maritime succulent scrub and 0.01 acre of southern maritime chaparral on site within the proposed MHPA, and contribute to the Habitat Acquisition Fund equivalent to 0.03 acre of Tier I habitat (\$750).~~

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Vegetation and Sensitive Resources/Impacts

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Figure 5.3-2

Table 5.3-6
MITIGATION REQUIREMENTS¹

Vegetation Community	Tier ^{2,3}	Impacts ⁴	Mitigation Ratio	Total Required Mitigation ⁵	Available Habitat Within MHPA ⁶	Net Difference
Maritime succulent scrub	I	0.03 ⁷	1:1	0.03	0.01	-0.02
		0.01 ⁸	2:1	0.02	--	-0.02
Southern maritime chaparral	I	--	--	--	0.01	+0.01
Diegan coastal sage scrub (including disturbed)	H	1.540.05	1:1	1.540.05	1.99	+0.45
Southern mixed chaparral	HIA ⁴	0.25	0.5:1	0.13	0.90	+0.77
Non-native grassland	HHB	--	--	--	0.03	+0.03
TOTAL		1.830.08	--	1.720.08	2.94	+1.22

¹All numbers are presented in acres.

²Tier I impacts require mitigation through preservation of Tier I habitat. What is not available on site would be mitigated through a contribution to the City's Habitat Acquisition Fund (upon approval by the Wildlife Agencies).

³Impacts to Tier II and HIA habitats allow mitigation through the preservation of any habitats in Tiers I through III.

⁴Brush Management Zone 2 impacts are considered impact neutral according to City regulation.

⁵Mitigation is assumed to occur within the MHPA.

⁶Available habitat within the proposed MHPA that is not within the existing open space easement.

⁷Impacts to 0.02 acre of maritime succulent scrub that occur outside the MHPA and outside the existing open space easement and impacts to 0.01 acre of maritime succulent scrub that occurs within the MHPA and outside the existing open space easement shall be mitigated at a 1:1 ratio.

⁸Impacts to less than 0.01 acre of maritime succulent scrub occur within the existing MHPA and within the existing open space easement. As such, mitigation would be at a 2:1 ratio for these impacts.

Source: HELIX 2007a.

5.3-3 Prior to issuance of any grading permit disturbing Diegan coastal sage scrub, the project applicant shall preserve, to the satisfaction of the Mayor/Environmental Designee, a total of 1.54 acres of Diegan coastal sage scrub (including disturbed) within the proposed MHPA.

5.3-4 Prior to issuance of any grading permit, which would allow the disturbance of southern mixed chaparral, the project applicant shall preserve, to the satisfaction of the Mayor/Environmental Designee, 0.13 acre of southern mixed chaparral on site within the proposed MHPA.

5.3-5 Should the California Coastal Commission adopt the City-proposed brush management regulation prior to project approval, the project applicant shall compensate for Zone 1 impacts by preserving an additional 0.05 01 acre of Diegan coastal sage scrub and 0.01 acre of southern mixed chaparral on site within the proposed MHPA and shall contribute to the City's Habitat Acquisition Fund equivalent to 0.01 acre of Tier I habitat (\$250) prior to issuance of any grading permit for buildings requiring brush management. If deemed appropriate by the City, and applicable to the proposed project, compensation for Zone 2 impacts shall be determined by the City based on agreements made during the LCP Amendment process.

~~5.3-6 Prior to issuance of the first grading permit which would allow the disturbance of native habitat, the project applicant shall fully fund the Habitat Management Plan endowment of \$44,500.~~

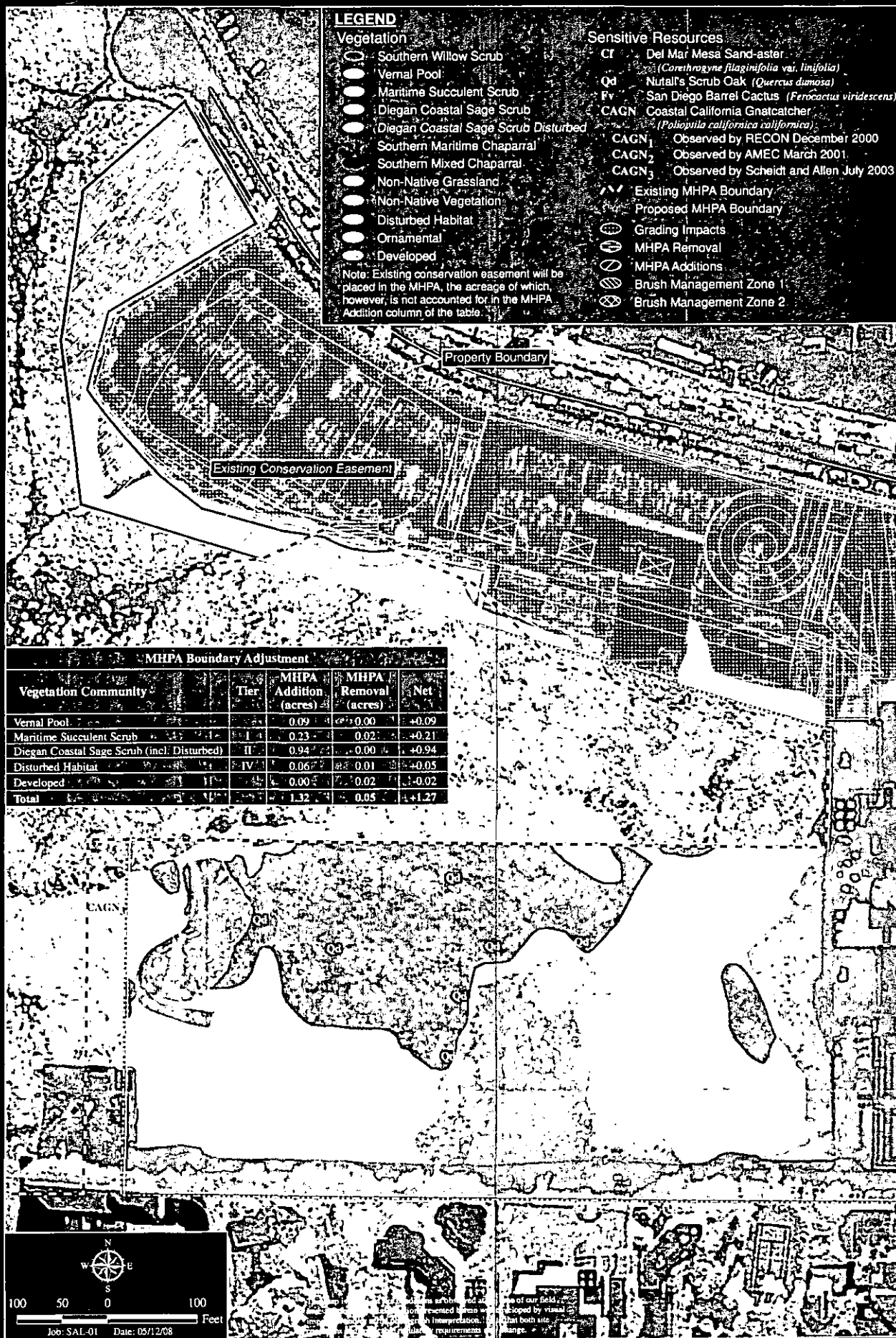
No significant impacts to wetland habitats are assessed; therefore, no related mitigation is required.

Issue 4: Would the proposal conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan or other approved local, regional or state habitat conservation plan, either within the MSCP Subarea Plan area or in the surrounding region?

The majority of the project site is located outside the MHPA; however, project grading and/or Zone 1 brush management would impact approximately 0.05 acre of the existing MHPA on site. The impact would occur along the southern edge of the northern parking lot and consist of 0.02 acre of developed land, 0.01 acre of disturbed habitat and 0.02 acre of maritime succulent scrub. An MHPA boundary line adjustment is proposed to include more on-site habitat in the MHPA than currently exists. The proposed boundary line adjustment would remove from the MHPA the 0.05 acre of impacted area described above, including 0.02 acre of sensitive habitat and 0.03 acre of parking lot, and add 1.27 net acres of more sensitive habitat in the MHPA, than currently exists. The proposed boundary adjustment would encompass area needed to offset the loss of sensitive habitat within the MHPA (0.0201), to mitigate for the loss of habitat (1.7 acre) and to increase the quality of the resources in the on-site MHPA (1.5 acres). An adjustment to the MHPA boundary would ensure that the biological value of the land added to the MHPA is greater than that subtracted from it, and would prevent significant impacts from occurring within the MHPA. Adjustments to the MHPA boundary line may be made without amending the Subarea Plan or the MSCP Plan in cases where the new MHPA boundary preserves an area of equivalent or greater biological value than what currently exists. The final determination regarding the biological value of a proposed boundary change would be made by the City, in accordance with the MSCP Subarea Plan. Boundary line adjustment concurrence from the wildlife agencies (i.e., USFWS and CDFG) was received in ~~November 2006~~ May 2008, and ~~January 2007~~.

The proposed MHPA boundary line adjustment would add ~~3.27~~ 1.32 acres of habitat to the MHPA, including ~~0.02 acre of southern willow scrub, 2.11~~ 0.94 acres of Diegan coastal sage scrub (including disturbed), ~~0.01 acre of southern maritime chaparral, 0.05~~ 0.23 acre maritime succulent scrub, ~~0.90 acre of southern mixed chaparral, 0.03 acre of non-native grassland, 0.09~~ 0.01 acre of vernal pools, ~~0.01 acre of non-native vegetation and 0.05~~ 0.06 acre of disturbed habitat (Figure 5.3-3, *MHPA Boundary Adjustment*; Table 5.3-67, *MHPA Boundary Adjustment Analysis*). A small amount of disturbed habitat and non-native vegetation is included in the area proposed for addition to the MHPA because it maintains the overall shape and continuity of the preserve and increases the preserve's total area.

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Approximately 0.05 acre of habitat would be removed from the existing MHPA, which includes 0.02 acre of maritime succulent scrub, 0.01 acre of disturbed habitat (bare ground), and 0.02 acre of developed area (parking lot). The removal includes a small portion (less than 0.01 acre) of the maritime succulent scrub that occurs within the existing (0.45-acre) open space easement on site.

The net result of the proposed boundary line adjustment would be an increase of 1.27 acres in the MHPA, consisting of an increase of 0.09 acre of vernal pools, ~~0.04~~ an increase of 0.21 acre of Tier I habitat, an increase of ~~2.11~~ 0.94 acres of Tier II habitat, and an increase of 0.05 acre disturbed habitat; ~~0.93 acre of Tier III habitat within the MHPA, for a total net increase of 3.22 acres and a decrease of 0.02 acre of developed land in the MHPA~~ (Table 5.3-67).

Table 5.3-~~67~~
MHPA BOUNDARY LINE ADJUSTMENT ANALYSIS (acre)

VEGETATION COMMUNITY	MSCP Tier	ON SITE		NET DIFFERENCE
		MHPA Subtraction Removal	MHPA Addition	
Southern willow scrub	--	0	0.02 0	+0.02 0
Vernal pool	--	0	0.09	+0.09
Maritime succulent scrub	I	0.02	0.05 0.23	+0.03 0.21
Diegan coastal sage scrub (including disturbed)	II	0	2.11 0.94	+2.11 0.94
Southern maritime chaparral	I	0	0.01 0	+0.01 0
Southern mixed chaparral	IIIA	0	0.90 0	+0.90 0
Non-native grassland	IIIB	0	0.03 0	+0.03 0
Disturbed habitat	IV	0.01	0.05 0.06	+0.04 0.05
Ornamental	IV	0	0.01 0	+0.01 0
Developed	--	0.02	0	-0.02
TOTAL		0.05	3.27 1.32	+3.22 1.27

Note: The existing open space easement on the north mesa totals 0.45 acre, of which 0.24 acre is within the existing MHPA. The proposed project would impact less than 0.01 acre of habitat that is located within the existing open space easement ~~and in the MHPA~~. Following implementation of the MHPA boundary adjustment, however, an additional 0.17 acre would be included in the MHPA.

Source: HELIX ~~2007~~2008

In order for a MHPA boundary line adjustment to be approved, six factors must be addressed relating to the biological value of the areas being evaluated (City of San Diego 1997a). These factors include effects on: conserved habitats, covered species, habitat linkages and function, preserve configuration, species diversity, and non-covered species. An evaluation of these six factors is provided in the project BTR (see Section 6.1.6 of Appendix B to this EIR). The analysis concluded that the proposed boundary adjustment would benefit the habitats, species and configuration of the MHPA. A Habitat Management Plan (HMP) would be implemented by the project applicant to ensure that the integrity

and habitat quality of the proposed MHPA is maintained. Therefore, the proposed project would not conflict with the provisions of the City's MSCP Subarea Plan.

Significance of Impact

The proposed project is not in conflict with the long-term conservation goals of the MSCP or other local, regional or state conservation plans. The proposed MHPA boundary line adjustment would prevent significant impacts from occurring within the MHPA and would not have negative effects on significantly and sufficiently conserved habitats, covered species, habitat linkages and function of preserve areas, preserve configuration and management, ecotones/species diversity, or species of concern not on the covered species list.

In addition, the project's contribution to the incremental loss of native habitats that is occurring within the City is considered to be a minimal cumulative impact on biological resources because the bulk of the impacts would occur outside the MHPA, and a boundary line adjustment is proposed such that no net loss of existing MHPA would occur. Impacts outside the MHPA were accounted for in the regional habitat conservation planning efforts for the City. It is further noted that the project would add 3.221.27 net acres to the MHPA, thereby improving regional habitat conservation.

Mitigation Measures, Monitoring and Reporting Program

~~Habitat-based mitigation measures described above under Issue 3, as well as the implementation of the proposed MHPA boundary line adjustment and implementation of the Habitat Management Plan, would mitigate any potential indirect impacts or conflict with the MSCP to below a level of significance. To ensure HMP implementation, a measure that requires applicant funding for its endowment is provided below.~~

5.3-2 Prior to issuance of the first grading permit which would allow the disturbance of native habitat, the project applicant shall fully fund the Habitat Management Plan endowment of \$44,500.

Issue 5: Would the proposal introduce land uses within an area adjacent to the MHPA that would result in adverse edge effects?

The project was evaluated for potential impacts to the MHPA per the Land Use Adjacency Guidelines (City of San Diego 1997a) as described below. The project includes the implementation of a HMP, as described in Section 3.0, *Project Description*.

Habitat Insularization

Habitat insularization is the fragmentation of large habitat areas into smaller islands effectively isolated from one another. Such fragmentation presents barriers to wildlife movement and breeding, splits animal and plant populations, and increases edge effects. Often, habitat insularization is associated with local species extinctions, since smaller habitat areas support relatively fewer species than larger ones. No impacts are expected to occur as a result of habitat insularization because the project would not isolate any habitat areas.

Drainage and Toxins

The proposed project would remove two large sources of toxins and petroleum products by redeveloping the large surface parking lots on site. Drainage from the proposed facilities and associated landscaping would be directed into the existing storm drain system and adjacent open space areas. Fossil filter inserts would be used at the minor inlets prior to discharge into the municipal storm drain system or into open space areas. Runoff also would be directed into landscaping and/or a vegetated swale before discharging from the site. The use of multiple pipe outlets to create sheet flow would avoid concentrating flow and causing erosion downslope. ~~Runoff from the portion of the project site west and north of the proposed daycare facility and its associated landscaping would sheet flow over existing slopes into native vegetated areas upstream of the MHPA, then sheet flow into the MHPA.~~ Therefore, the release of toxins, chemicals, petroleum products and other harmful elements would be minimized with implementation of the proposed project.

Runoff on the north mesa currently sheet flows across the parking lot and empties into the vernal pool area through two riprap piles. The vernal pools in this area hold water for much of the year, even in the summer when naturally occurring vernal pools are dry. This extended period of inundation in these pools is likely due to the continued runoff from the adjacent Institute facilities and parking lot. ~~The proposed project~~ Implementation of the Salk Community Center Building on the northern mesa would not substantively change the amount of runoff entering the vernal pool area; rather, runoff entering the vernal pool area would increase by one percent (Latitude 33 2006a). The project design would, however, remove a strip of paved parking lot area and building area and construct a rock-lined, vegetated swale adjacent to the proposed MHPA and vernal pool area as part of the Salk Community Center Building component of the project. Project runoff would flow through the vegetated swale prior to entering the vernal pool area, thereby improving the vernal pool water quality and reducing (through infiltration) the amount of runoff entering the pools. The following list of plant species are ~~identifies plants that are~~ appropriate for the vegetated swales and that are included in the landscape design guidelines: California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), California encelia (*Encelia californica*), golden-yarrow (*Eriophyllum confertiflorum*), melic (*Melica imperfecta*), foothill needlegrass (*Nassella lepida*), purple needlegrass (*Nassella pulchra*), and blue-

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eyed grass (*Sisyrinchium bellum*). In addition, the buffer distance between the proposed development and the pools would increase from 15 to ~~30~~40 feet, with a vegetated swale intervening.

The southern willow scrub habitat ~~found occurring on site would is not be expected to experience direct impacts~~ and is located a minimum of 100 feet or more away from the proposed project grading and development. Thus, the proposed project respects the 100-foot wetland buffer required in the ESL for City wetlands property within the Coastal Zone and no indirect drainage or toxin impacts are anticipated with the development of the proposed project.

Structural and non-structural Best Management Practices (BMPs), Best Available Technology (BAT), and Fossil Filter/Flo-gGard™ storm drain filter inserts (or equivalent devices as approved by the City of San Diego) would be installed at all project storm drain inlets to treat runoff from developed areas prior to discharge into off-site or natural areas. Additionally, the project design would comply with the Municipal Stormwater Permit criteria of the City and the RWQCB.

No significant impacts related to drainage or toxins would occur upon implementation of the project design measures.

Lighting

New night lighting would have the potential to expose adjacent wildlife species to an unnatural light regime, may alter their behavior patterns, and consequently result in a loss of species diversity. Unless appropriate measures are taken to prevent dispersion of light into the adjacent MHPA, potential lighting effects could be a significant impact. To prevent such significant impacts, the project design would remove existing overhead lighting in the northern parking lot adjacent to the MHPA and the design guidelines contain language that addresses all outdoor lighting installed on new development adjacent to open space areas. According to the project design guidelines, outdoor lights would be shielded to prevent light from spilling off site. Shielding would consist of the installation of fixtures that physically direct light away from the outer edges of the property or landscaping, berms or other barriers that prevent light overspill. Final building plans for the development adjacent to open space areas (e.g., MHPA) would depict the shielded light fixtures or other mechanisms. Streetlights in parking lots that currently shine into the open space areas would be removed and not replaced. No new overhead lighting of parking areas or driveways is proposed. Implementation of these project design measures and guidelines would result in no significant lighting impacts.

Noise

The MSCP Subarea Plan identifies noise within and adjacent to the MHPA as a potentially significant impact on sensitive species. Operation of the proposed ~~daycare facility, temporary housing,~~ north lawn core facility, Salk Community Center Building, and associated parking areas, by nature of the development type, would not generate and introduce noises that would significantly impact or interfere

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with wildlife utilization of the adjacent MHPA. ~~An analysis of the playground noise determined that ambient noise levels would not substantially change with the daycare operations in place (URS 2006). Potential short-term noise impacts could result from construction of these proposed project components for the proposed project, however. Noise effects would be considered significant if construction noise levels exceed a level of 60 dB L_{eq} hourly average (including ambient noise) adjacent to nesting coastal California gnatcatchers or nesting raptors during the breeding season (March 1 to August 15 for gnatcatcher and (February 1 through September 15 for raptors). No nesting gnatcatchers or active raptor nests were observed on site. Individual coastal California gnatcatchers have been observed in the northern and central portion of the site during numerous site visits and likely occur in the MHPA off site. Therefore, construction noise-related impacts to this species are potentially significant.~~

Barriers

~~The potential for nuisance animal species impacts on native species on site exists due to the temporary housing component of the project. In particular, cats are known to harm native rodent and bird populations in locations where they have access to natural areas. Domestic animals could potentially impact native wildlife within the proposed MHPA. The temporary dwellings proposed on site would house the Institute visitors and short-term employees. No housing units are proposed on the northern portion of the project site. The project's contribution to nuisance animal species (domestic animals) impacts on native wildlife would not be substantial because of the transient, short-term character of the temporary residents on site (i.e., less likely to have domestic animals) and the fact that the effects of domestic animals are likely already felt by species on site due to the existing residential development that occurs adjacent to the project site. Therefore, potential impacts to wildlife resulting from an increase in domestic animals would be adverse, but less than significant. As such, no barriers would be required on the south mesa to control nuisance species.~~

~~Pedestrian traffic also has a low potential to occur within the southern MHPA. On the southern portion of the site, no formal beach access/trails are provided and the steep topography would also deter people from traversing across the open space. Therefore, no significant impacts would be expected to occur requiring barriers on the southern portion of the site.~~

On the northern portion of the project site, a sidewalk exists along Torrey Pines Scenic Drive which leads to informal trails that provide access to the beach and Torrey Pines Gliderport. This sidewalk would remain and be extended to the western property boundary under the proposed project. A terrace and walkways are proposed around the Salk Community Center Building and a few informal trails occur on the mesa. A rock-lined, vegetated swale and associated vegetated barrier are proposed along the interface between the Salk Community Center Building and open space on the northern portion of the project site. The vegetated swale and vegetated barrier would preclude pedestrian activity into the MHPA from the terraces surrounding the Salk Community Center Building. An approximately 220-foot long, 4-foot high barrier would also be installed between the vernal pools and proposed sidewalk extension as part of the Salk Community Center Building development to eliminate or reduce the potential for pedestrian traffic

traversing the vernal pool area. Implementation of these project design features would reduce impacts associated with human intrusion into the MHPA to below a level of significance.

Brush Management/Invasive Species Intrusion

The project applicant would be required to conduct brush management activities around buildings adjacent to currently undeveloped areas. All brush management would be accomplished on site in accordance with the City's current brush management regulations (Figures 5.3-2 and 5.3-3), unless the proposed brush management revisions are adopted prior to project approval (see Issue 3 in this section). Brush Management Zone 1 would involve complete removal of existing vegetation replaced with appropriate landscaping or hardscape (i.e., pavement) as described above under Issue 3. Brush Management Zone 2 would involve selective removal of large plants and thinning of vegetation, which is considered impact neutral by existing City regulations. The amount of vegetation removed in Zone 2 cannot exceed 50 percent in accordance with the City's Landscape Technical Manual. The removal or thinning of vegetation could result in a loss of habitat value and/or invasion of non-native plants (City of San Diego 2004i).

All vegetation removal and thinning would be accomplished in accordance with the City's standards, the MSCP Subarea Plan and the fire management recommendations in the proposed project's HMP (HMP; HELIX 20087b). Potential effects on sensitive species would be minimized by implementation of HMP recommendations that require avoidance of the gnatcatcher breeding season; flagging and signage of preserve boundaries and sensitive areas in the MHPA; restrictions on vehicular access; and the use of a brush management contractor familiar with local biological resources. Outside the MHPA, brush management would be conducted outside the gnatcatcher breeding season and no narrow endemics would be affected by the potentially larger brush management zone.

Project landscaping or brush management would not result in the introduction of invasive (i.e., non-native) species into the native habitats on and off site, as no invasive species are included in the project landscape plans or plant palette in the Design Guidelines that would guide the revegetation plans for the drainage swale and all vegetation efforts adjacent to the MHPA. Implementation of the project Landscape dDesign gGuidelines, which restrict the use of invasive plant species, combined with compliance with the MSCP Subarea Plan and implementation of the proposed HMP, would ensure that brush management on the project site would not result in the invasion of exotic species. Nonetheless, because no specific landscape plans have been prepared for the Salk Community Center Building ~~or the housing~~, impacts resulting from brush management/invasives intrusion could be potentially significant.

The proposed LCP Amendment under consideration by the California Coastal Commission would increase both brush management zones to a total width of 100 feet, which would increase direct and indirect impacts to sensitive habitat on and off site. The impact, however, would not be greater than the 200-foot wide brush management zone analyzed in the MSCP EIR/EIS (City of San Diego 2004i). No impacts to narrow endemic species are anticipated should the wider brush management zones be

000796 implemented on site since none occur on site. Potential indirect impacts on habitat value resulting from the implementation of the new brush management policy on the Salk Institute site are, therefore, not considered significant due to project compliance with existing City regulations and implementation of the preserve management and planning guidelines of the MSCP.

Grading/Land Development

Although the proposed project site contains MHPA and is immediately adjacent to off-site MHPA, the proposed impact footprint ~~proposes to would~~ affect a minor amount of scrub habitat (due to brush management) and disturbed and developed areas (associated with grading). No grading or development would occur outside of the impact footprint. ~~The potential exists for accidental encroachment into sensitive habitats during project construction.~~ No new trails into the habitat are proposed. Due to its proximity to proposed grading and building construction, however, the potential exists for accidental encroachment into sensitive habitats during project construction.

Significance of Impact

Due to the inclusion of project design features and compliance with City regulations and the MSCP that would minimize related effects, no significant impacts are anticipated due to habitat insularization, drainage and toxins, lighting, and barrier/nuisance species. Indirect impacts due to noise, brush management/invasive species intrusion, and grading/land development would be potentially significant.

Mitigation Measures, Monitoring and Reporting Program

Impacts due to noise, brush management/invasive species intrusion, and grading/land development are potentially significant despite compliance with City regulations and the MSCP Subarea Plan; however, measures described below would mitigate such impacts to a level less than significant and ensure that the proposed project is in conformance with the MSCP Land Use Adjacency Guidelines.

5.3-37 Prior to the first pre-construction meeting for the ~~daycare facility~~, Salk Community Center Building, north lawn core facility, ~~housing~~ and northern parking structure, the Mayor/Environmental Designee shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the construction plans:

- No clearing, grubbing, grading, or other construction activities shall occur within 500 feet of the MHPA between March 1 and August 15, the breeding season of the coastal California gnatcatcher, until the following requirements have been met to the satisfaction of the Mayor/Environmental Designee:

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A. A qualified biologist (possessing a valid ESA Section 10(a)(1)(A) Recovery Permit) shall survey appropriate habitat (coastal sage scrub) areas within the off-site MHPA that lie within 500 feet of the project footprint and would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the coastal California gnatcatcher. If no appropriate habitat is present then the surveys will not be required. If appropriate habitat is present, surveys for the coastal California gnatcatcher shall be conducted pursuant to the protocol survey guidelines established by the USFWS within the breeding season prior to the commencement of any construction. If gnatcatchers are present within the MHPA, then the following conditions must be met:

- I. Between March 1 and August 15, no clearing, grubbing, or grading of occupied gnatcatcher habitat shall be permitted within the MHPA. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; and
- II. Between March 1 and August 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied gnatcatcher habitat within the MHPA. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the Mayor/Environmental Designee at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; or
- III. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat (within the MHPA) occupied by the coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area within the MHPA to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified

acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16).

*Construction noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat within the MHPA are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the Mayor/Environmental Designee, as necessary, to reduce noise levels within occupied MHPA habitat to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

If coastal California gnatcatchers are not detected within the MHPA during the protocol survey, the qualified biologist shall submit substantial evidence to the Mayor/Environmental Designee and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 1 and August 15 as follows:

- If this evidence indicates the potential is high for coastal California gnatcatcher to be present based on historical records or site conditions, then Condition A.III shall be adhered to as specified above.
- If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

5.3-48 Prior to issuance of any grading permits for projects adjacent to the MHPA, the City shall review the final landscaping plan(s) for the Salk Community Center Building ~~and housing units~~ to ensure that plants in any category of the California Invasive Plant Council (Cal-IPC) 2006 list, or otherwise known to the City to be invasive species, are not being used.

5.3-59 Prior to grubbing, clearing, and/or grading for the ~~daycare facility, housing units, Salk Community Center Building and northern parking garage~~, a pre-construction meeting shall be conducted with the project biologist and the construction supervisors. All sensitive areas to be avoided shall be flagged, and the contractors shall be informed regarding no-entry areas.

5.3-610 Prior to grubbing, clearing, and/or grading for the ~~daycare facility, housing units, Salk Community Center Building and northern parking garage~~, the entire limits of grading shall be fenced with silt fencing and orange construction fencing to preclude entry into sensitive MHPA or other preserved areas.

5.3-744 During grading for the ~~daycare facility, housing units,~~ Salk Community Center Building and northern parking garage, a biological monitor shall conduct site visits to assure that construction personnel and equipment do not encroach upon any sensitive areas.

5.4 HISTORICAL RESOURCES

Historical resources are divided into two subcategories: historic and archaeological. An historic resource (generally located above ground) is any building, structure or object that is at least 50 years old and that is, or may be, architecturally or culturally significant in city, state or national history. Archaeological resources (generally located below ground surface) are further divided into two subcategories: prehistoric and historic. Prehistoric archaeological resources date from before the onset of the Spanish colonial period (1769 – 1848) and historic archaeological resources date from after the onset of the Spanish colonial period (City of San Diego 2003d).

An historical resources technical report for the proposed expansion of the Salk Institute (Institute) was prepared by Page & Turnbull, Inc (Page & Turnbull 2007a). This report has been included in Appendix C to this EIR, and is summarized below. An addendum to the historical resources technical report was prepared to analyze the historical landscapes on site (Page & Turnbull 2007b). This addendum is discussed below and included in Appendix C to this EIR. An archaeological survey for the proposed project was performed by Kyle Consulting. The results of that survey, as well as the findings from a literature review and records search, are contained in an archaeological study (Kyle Consulting 2005). The archaeological study is summarized below and has also been included in Appendix C to this EIR.

5.4.1 Existing Conditions

Area of Potential Effect

In compliance with the City's Historical Resources Guidelines, an Area of Potential Effect (APE) must be delineated for any proposed project that could potentially impact an historical resource. Investigations and surveys for this project, described below, are conducted within the APE to identify the presence or absence of historical resources and, if present, to evaluate their significance. A project's APE corresponds to the geographic area within which both the direct and indirect impacts of a project could occur. Direct impacts to the character or use of historical resources are generally those that will cause physical damage to the resource. Indirect impacts on the built environment include the introduction of visual, audible or atmospheric effects that are out of character with the property or will alter its setting, when the setting contributes to the historic property's significance; indirect impacts to archaeological resources can occur as a result of a project's implementation if it increases public accessibility to such resources (City of San Diego 1997e, as amended). Page & Turnbull established the proposed project APE as the entire legal parcel owned by the Salk Institute for Biological Studies (see site boundary on Figure 2-3).

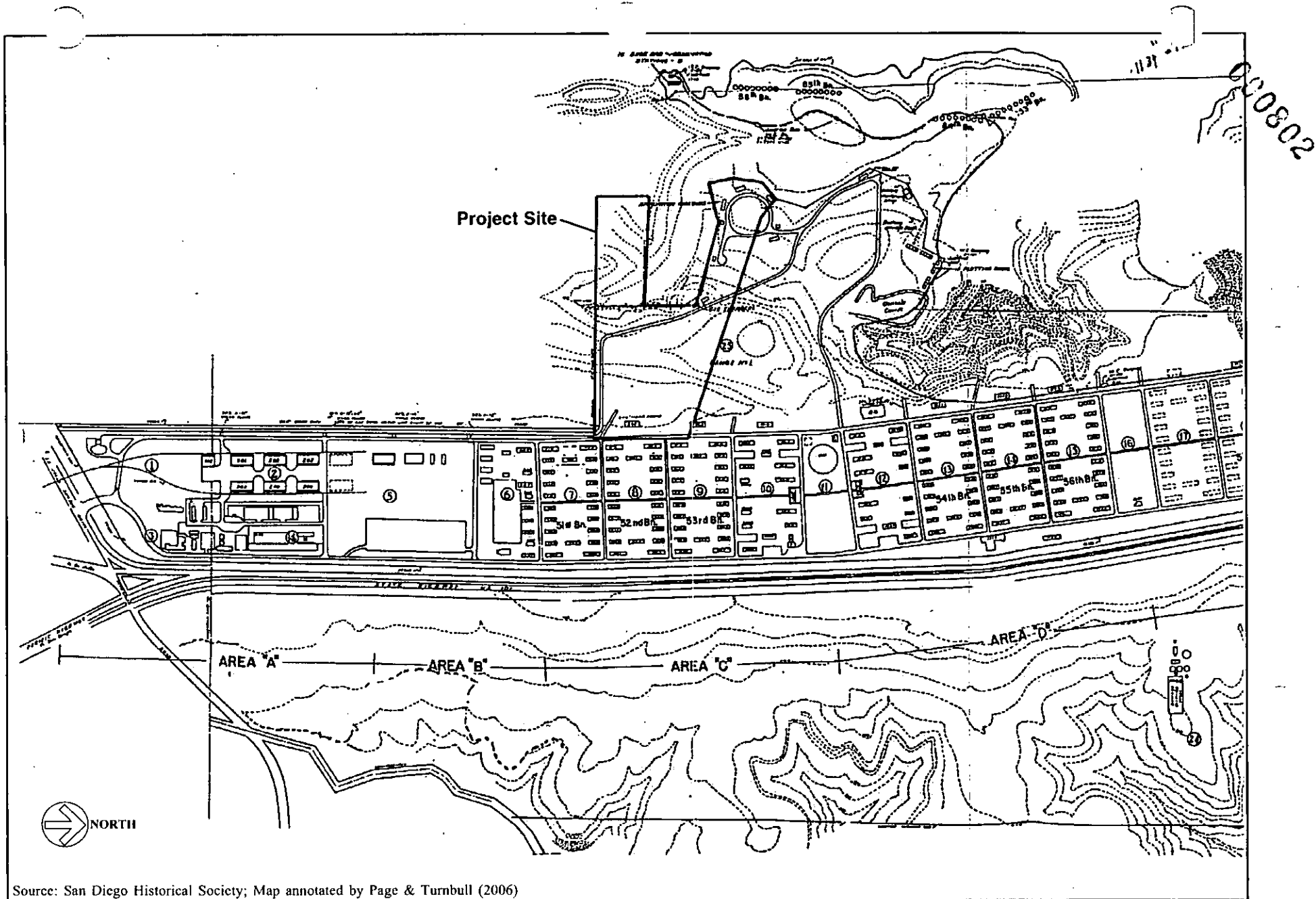
Historical Setting

Camp Callan

The City designated 364 acres of Pueblo Lands, encompassing what is now the Institute campus and surrounding lands, as Torrey Pines City Park in 1899. The City acquired two additional Pueblo Lots via donation from Ellen Browning Scripps in 1908 and 1911, and even more acreage was added by the City Council in 1924, enlarging the park to over 1,000 acres of beaches, coastal bluffs, canyons, and mesas. During the late 1930s, with the U.S. preparing for a possible war in the Pacific, the U.S. Army leased 710 acres of Torrey Mesa parkland from the City, and several hundred more acres from adjoining private landholders, "to build an installation that would protect San Diego from naval attack" and serve as a training facility (Appendix C). Totalling more than 1,000 acres, the Army-leased lands became the site of Camp Callan in January 1941, a World War II-era Army camp that focused on coastal artillery, anti-aircraft and amphibious assault training (refer to Figure 5.4-1, *(World War II-era Map of Camp Callan)*). Following the end of the war, Camp Callan was declared surplus property and the Army sold or removed all salvageable equipment. By December 1945, the camp was closed, only temporary buildings were left behind, and the City repossessed its section of the camp, including most of what is presently the Institute campus (Appendix C). City staff disassembled the remaining abandoned buildings and sold the lumber and other salvageable items to local residents. The site was cleared in the process, with only the concrete foundation pads and earthworks left behind, and left vacant into the 1950s.

The City eventually gave Torrey Pines City Park to the State of California Division of Beaches and Parks, with a portion dedicated to the 1957-built, City-owned 100-acre Torrey Pines Golf Course. UCSD was founded on the east side of La Jolla Scenic Drive (now North Torrey Pines Road) in 1958; in 1959, when Jonas Salk was looking for an appropriate site to build his proposed research institute, he was taken by the then-Mayor of San Diego to the Torrey Mesa site. Salk accepted the gift of approximately 27 acres from the City in 1960 and commissioned Louis Kahn to design what was then to be called the Institute for Biology at Torrey Pines.

As described in Section 2.0 of this EIR, the property which now supports the 26.3-acre Institute campus is located in the University City community within the City of San Diego (City). Donated to the Institute in 1959 by City voters, the campus is situated on a bluff within a U-shaped parcel, with the easternmost portion of the campus comprising the "base of the U" (see Figure 2-2). This portion of the site comprises the original laboratory building and associated courtyard, the north and south lawns, the East Building and associated surface parking lot, and eastern temporary structures; it is often referred to in the EIR as the "eastern portion of the site," however, in this section and in Appendix C it is called the "east mesa". At the center of the east mesa is the original laboratory building designed by renowned architect Louis Kahn, with input from Jonas Salk, and associated courtyard and landscaping (Appendix C). The two "arms of the U" (i.e., the north and south mesas)



RGIS\SAL-01 Salk\Map\EIR\Fig5.4-1_CampCallan.pmd - JP

World War II-era Map of Camp Callan

SALK INSTITUTE

Figure 5.4-1

extend westward and embrace an off-site coastal canyon that is part of Torrey Pines City Park (see Figure 5.1-3). The south mesa is currently undeveloped, while the developed north mesa is devoted primarily to the western temporary laboratory structures and surface parking.

Tri-partite Scheme

The Salk and Kahn 1961 Master Plan (1961 Master Plan) was built around Kahn's now-famous tri-partite scheme, which was intended to take advantage of the site's unique boundaries and layout with three major components planned for the north, south and east mesas. Initially developed by Kahn, the tri-partite scheme formed the basis of the 1961 Master Plan, which was finalized subsequent to several revisions and consistent input from Salk (see Figures 5.1-1a and 5.1-1b). The three components of the tri-partite scheme included "Section A," the Meeting Center on the north mesa overlooking the Pacific, intended by Salk and Kahn to be the centerpiece of the Institute due to its planned size, location and semi-public use; "Section B," the Research and Study Area on the east mesa, planned to be the functional heart of the Institute and realized (in part) by the construction of the original laboratory building; and "Section C," the Quarters for Visiting Fellows on the south mesa, a westward-cascading complex of apartment and dwellings for visiting researchers (Appendix C). Due to intense detailing on the original laboratory building specified by Kahn, and the resultant cost overruns, Kahn's work on Sections A and C was suspended in 1963, with subsequent revisions to the site plan noting that the Meeting Center and Quarters for Visiting Fellows would be phased for future construction when additional funding could be acquired, as would other sections of the campus, including the east mesa, the north and south lawns, and the eastern portion of the south mesa. As a result of such delays, the original laboratory building (and adjoining landscaping) was the only significant portion of the 1961 Master Plan to be realized.

The Institute is one of California's most significant monuments of the Modern Movement, the dominant architectural movement of the 20th century. The centerpiece of the campus, the Louis Kahn-designed original laboratory building, is universally recognized by architectural historians as being one of the most significant Modernist works in the United States. The original laboratory building consists of two multi-level above-ground structures (i.e., the north and south buildings) atop a continuous basement-level structure. The north and south laboratory buildings flank a travertine-finished courtyard with unobstructed westerly views of land, ocean, and sky. Designed in the early 1960s and completed in 1965, the original laboratory building and adjoining landscape elements comprise one of Kahn's most important built projects (Appendix C). Designed in response to continuous input from institute founder Jonas Salk, the original laboratory building is significant not only for its aesthetic contributions to the body of architecture, but also for its innovative layout and organization, serving as the model for dozens of research and scientific laboratories subsequently constructed throughout the world (Appendix C).

Landscape Setting

North Lawn. The original laboratory building is surrounded by landscape elements designed by Louis Kahn and members of his design team. The north lawn, located between the north wing of the original laboratory building and Torrey Pines Scenic Drive, is an original component of the 1961 Master Plan. According to the 1965 Landscape Plan, it currently exists in a state similar to when it was originally designed, although it is lacking many of the trees depicted on the 1965 plan, which appear to have died or been replaced (Appendix C). The north lawn is a largely unobstructed grass lawn crossed by brick paths and, on the Torrey Pines Scenic Drive side, lined with eucalyptus trees (i.e., remnants of the original perimeter plantings) and Torrey pines, which have been planted to replace the eucalyptus as they have died.

South Lawn. Originally intended for planting following the 1965 completion of the original laboratory building, the south lawn was postponed due to cost overruns and the area was instead covered with a temporary surface parking lot. Following the construction and subsequent expansion of the below-grade research facility in 1978 and 2001, respectively, the south lawn was planted on the roofs of these facilities. A low concrete wall marks the extent of the existing lawn which, according to Appendix C, largely replicates the appearance of the south lawn as it was originally proposed.

North Mesa. The north mesa landscaping envisioned by Kahn and his team was to have been minimal, consisting primarily of trees planted alongside a planned path connecting the original laboratory building with the 1961 Master Plan-proposed Meeting Center. The Meeting Center has never been built due to financial constraints, and the north mesa has instead been covered by a large surface parking lot, several temporary laboratory structures, three small greenhouses and other miscellaneous small structures. The original landscape vision for this portion of the campus has never been implemented, and the small portions of the north mesa which remain undeveloped (i.e., the upper margins of the off-site coastal canyon) are currently covered in extant natural vegetation (as opposed to man-made landscaping; Appendix C).

South Mesa. As also applies to the original plans for the south lawn and north mesa portions of the campus, the Quarters for Visiting Fellows proposed in the 1961 Master Plan for the south mesa was indefinitely postponed due to financial constraints. Instead of accommodating the Kahn-envisioned residential buildings terracing down the southwestern edge of the site, the south mesa has been the depository of excavation materials from the 1965 laboratory construction; these materials formed the distinctive "mound" that now exists near the center of the mesa. The wastewater pumping station and the 1985 land exchange with the City (see above) altered the original 1961 Master Plan property boundaries and the appearance of the western end of the south mesa (Appendix C).

East Mesa. A considerable amount of the original Institute landscaping remains intact on the east mesa, the most heavily developed portion of the campus. Completed in 1995, the East Building was

constructed on the site of a eucalyptus grove that pre-dates the Institute; a portion of this grove remains in place today. The large, surface east parking lot adjacent to the East Building is lined on the east with original plantings of eucalyptus and other trees and shrubs, forming a dense vegetation screen between North Torrey Pines Road and the campus (Appendix C). Several planting strips within the east parking lot also feature rows of Chinese Fringe trees (*Chionanthus retusa*), which were a part of the 1965 Landscape Plan. While much of the original east mesa landscaping remains intact today, some of the original perimeter plantings along Salk Institute Road have been removed to accommodate road improvements or by adjacent property owners (Appendix C).

Changes to the Campus

Although the 1961 Master Plan-envisioned Meeting Center and Quarters for Visiting Fellows have not been built due to funding issues, the following changes have occurred on the campus since the completion of the original laboratory building: the construction of the non-contributing (i.e., not contributing to the historic resource, but located within its setting) temporary buildings on the north and east mesas of the campus; the Institute's 1985 exchange of approximately 2.5 acres of land along the western edge of the south mesa for approximately 2.3 acres of City-owned land on the southern edge of the north mesa; and the 1995 construction of the East Building, designed to be compatible with the Kahn-designed original laboratory building.

Archaeological Setting

As stated above, the project area comprises the eastern portion of the Institute campus (which includes the existing permanent facilities of the Institute) and two mesas located to the west of the original laboratory building (see Figures 2-1 and 2-2). Bounded by Torrey Pines Scenic Drive to the north, the existing main Institute facility to the east, level area to the west and slopes to the south, an existing large surface parking lot that has been graded and paved comprises the western portion of the north mesa, with two existing temporary buildings sited in the eastern portion of this mesa. The undeveloped south mesa at the western end of Salk Institute Road, across the drainage/canyon from the north mesa, is bounded by the existing Institute facility to the east and undeveloped off-site areas to the north and west. This mesa consists of steep hillsides that descend into an unnamed drainage area and a knoll or mound that was created when soil was moved to the location during grading for the existing facility in the early 1960s (see Figure 2-3).

Soils located within the study area include Gaviota series and terrace escarpments (Soil Conservation Service [SCS] 1973). Gaviota series soils consist of well-drained shallow fine sandy loams formed in material that has been weathered from marine sandstone; slopes of these soils range between 9 and 50 percent. Terrace escarpments consist of steep to very deep sloping landscapes, and they occur on nearly even fronts of terraces and alluvial fans generally on coastal plains.

Prehistoric Archaeological Survey Results

An archaeological field survey for the proposed project was performed by Carolyn Kyle and Robert Kyle on March 28, 2005. Ground visibility was generally poor at the time of the field survey, and dense vegetation covered much of the undeveloped portions of the study area (Appendix C). The visible portions of the two parcels were intensively surveyed, however, steep slopes and hillsides in the study area were not surveyed due to concern for the surveyors' safety and because steeply sloped areas would not have been used by prehistoric occupants. The field survey revealed that no cultural (i.e., prehistoric archaeological) resources exist on site.

In preparation for the field survey, an archaeological records search was conducted. The results of the records search indicated that previous studies completed within the current study area include cultural resource monitoring for the Salk Institute East Building and North Parking Lot (Cheever 1992), as well as a cultural resource survey of the proposed Northwest Parking Lot Expansion Site (Berryman and Cheever 2000a) and the South Mesa Mitigation/Conservation area for the Institute (Berryman and Cheever 2000b). No cultural resources were identified within the study area during monitoring by Cheever (1992) or the later surveys by Berryman and Cheever (2000a, 2000b).

A letter received from the Native American Heritage Commission (NAHC) dated November 24, 2004 indicate the NAHC findings from a records search of its Sacred Lands File for the proposed project area. The NAHC records search "failed to indicate the presence of Native American cultural resources in the immediate project area" (NAHC 2004).

Regulatory Framework

The treatment of historical and archaeological resources is governed by federal, state and local laws and guidelines. The criteria for determining a resource's significance generally focus on a resource's integrity and uniqueness, its relationship to similar resources and its potential to contribute important information to scholarly research; some resources that do not meet federal significance criteria may be considered significant under state or local criteria (UCSD 2004d).

Federal

National Historic Preservation Act of 1966 and National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official federal list of cultural resources that have been nominated by state offices for their significance at the local, state, or national level. Listing on the NRHP provides recognition that a property is historically significant to the nation, the state or the community, and it assumes that federal agencies consider historic values in the planning of federal and federally assisted projects.

Properties listed in the NRHP, or "determined eligible" for listing, must meet certain criteria for historical significance and possess integrity of form, location, and setting. Structures and features must usually be at least 50 years old to be considered for listing on the NRHP, barring exceptional circumstances. Criteria for listing on the NRHP are stated in Title 36, Part 60 of the Code of Federal Regulations (36CFR60), which states that a resource may qualify for listing if there is quality of significance in American history, architecture, archaeology, engineering, and culture present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association; and that such resources:

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

Eligible properties must meet at least one of the NRHP criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character, the degree to which the original historic fabric has been retained, and the reversibility of changes to the property. The fourth criterion is typically reserved for archaeological and paleontological resources. These criteria have largely been incorporated into the State CEQA Guidelines as well (Section 15064.5).

State

California Environmental Quality Act

For the purposes of CEQA, a significant historic resource is one that qualifies for the California Register of Historic Resources (CRHR) or is listed in a local historic register or deemed significant in an historical resource survey, as provided under Section 5024.1(g) of the Public Resource Code. A resource that is not listed in or is not determined to be eligible for listing in the CRHR, is not included in a local register of historic resources, or is not deemed significant in an historical resource survey may nonetheless be historically significant for purposes of CEQA (City of San Diego 1997e, as amended).

As indicated above, the California criteria for the registration of significant architectural, archaeological and historical resources on the CRHR are nearly identical to those for the NRHP. Furthermore, CEQA Sections 15064.5 and 21083.2(g) define the criteria for determining the

significance of archaeological resources, which are now included in the definition of the term "Historical Resources" for the purposes of CEQA (Section 21084.1).

As described below under *California Register of Historic Resources*, the entire Salk Institute property has been determined to be eligible for the NRHP.

Public Resources Code Section 5020 et seq.

California Register of Historic Resources. State law also protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are State Historical Landmarks and Points of Interest. The CRHR, maintained by the State Historic Preservation Officer (SHPO), also includes properties designated under local ordinances or identified through local historical resource surveys.

Properties listed on the CRHR or under review by the State Office of Historic Preservation (OHP) are assigned status codes of 1 through 7 to establish a record of their historical significance. According to a record search of the California Historical Resources Information System (CHRIS) from the South Coastal Information Center at San Diego State University, the Institute has not been assigned a California Register Status Code (Appendix C). In August 2005, the California State Historical Resources Commission (SHRC) concurred with neighbors of the Institute (i.e., La Jolla Farms Homeowners and Friends of Salk Canyon) who nominated the Institute for listing on the NRHP. The SHRC determined that the entire Institute parcel was eligible for listing on the NRHP (and, thus, on the CRHR). During the approval process for the NRHP nomination, several commissioners of the SHRC indicated that the approval should not prevent future development on the campus. The Institute was opposed to the nomination as prepared, however, because the Institute wished to establish a more concise geographic parcel boundary for purposes of the listing. As detailed in Appendix C, due to the Institute's opposition to the nomination, the property cannot be formally listed at this time on the NRHP, but does remain eligible for listing per the SHRC. Upon reception by the Keeper of the NRHP, OHP will assign the Institute a Status Code of "2S," meaning that the property is an "Individual property determined eligible for NR[HP] by the Keeper. Listed in the CR[HR]."

Public Resources Code Section 5097 et seq.

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and designates the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to a year

in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

Public Resources Code Section 65560 and 65562 et seq.

State law mandates that after March 1, 2005, any land designated or proposed to be designated as open space and that may contain a cultural place must be protected; establishes a contact list of California Native American Tribes created by the NAHC specifically for this purpose (i.e., through Senate Bill 18) and establishes a protocol for the initiation of consultation by the local government from the city or county in which the cultural place is located with the appropriate Native American Tribe(s), for the purposes of (1) determining the level of confidentiality required to protect the cultural place and (2) developing treatment with appropriate dignity of the cultural place in any corresponding open space management plan (if such one exists). An appropriate tribe is one that has been identified on the NAHC contact list and that has, pursuant to Government Code Section 65092, requested notice of public hearing from the local government in advance of that jurisdiction's initiation of consultation. The City initiated a Native American consultation on this project due to the proposed MHPA boundary line adjustment. Representatives from the Native American community (i.e., Carmen Lucas and Clint Linton) have indicated in preliminary conversations with City staff that there is the potential on the Salk Institute property for unknown archaeological or cultural resources, in particular burial sites, based on the identification of Native American burials at other properties in the project vicinity with similar topography. Therefore, the City will continue consulting with the Native American community in an attempt to reach a mutual agreement over their concerns for the potential resources in accordance with state law.

Local

Historical Resources Register

As compared to CEQA, the City provides a broader set of criteria for eligibility for the City's Historical Resources Register. As stated in the City's Historical Resources Guidelines, "Any improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area or object may be designated as historic by the City of San Diego Historical Resources Board if it meets any of the following criteria:

- Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
- Is identified with persons or events significant in local, state or national history;

- Embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist or craftsman;
- Is listed or has been determined eligible by National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the SHPO for listing on the State Register of Historical Resources; or
- Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

On February 27, 1991, the San Diego Historic Sites Board voted to include the Salk Institute as Historic Site No. 304 in the San Diego Historical Resources Register on the basis of its association with Louis Kahn and Jonas Salk and for its "architectural significance" (see bullets 4 and 5 above). According to the resolution, the designation "specifically covers all façades of both [original laboratory] buildings, the view to the west which they frame, the upper terrace entry way with its ornamental grove concept, the central plaza with its watercourse, the lower terrace with its fountain, gates and terrazzo seating areas." The resolution went on to state: "This is no way intended to curtail the future development of other areas of the site as was originally intended." Additionally, the Historic Sites Board approved the proposed construction of the East Building consistent with the plans, model and design shown to the Board and directed staff to prepare a nomination to the NRHP for the Institute. Although not called out in the 1991 resolution, the City subsequently applied a 100-foot buffer zone surrounding the original laboratory building in accordance with Section 143.0220(d)(2) of the San Diego Municipal Code (SDMC). According to Appendix C, however, the NRHP nomination was never completed by City staff; rather, as discussed above, the Institute's nomination to the NRHP was initiated by neighbors of the Institute in 2005.

City of San Diego Municipal Code: Historical Resources Regulations and Historical Resources Guidelines

The City's Historical Resources Regulations (SDMC 143.0201 et seq.), determine the procedures for processing proposed development plans, among other things, if designated historical resources are present on a site. As the Institute campus is a designated Historical Resource within the City, the proposed project is, therefore, required to comply with the City's Historical Resource Regulations. If a substantial alteration to the historic resources of the site is proposed, mitigation for the potential

030511 impacts to historical resources must be provided in accordance with the Historical Resources Guidelines.

The City's Historical Resources Guidelines serve to implement the Historical Resources Regulations in compliance with applicable local, state and federal policies and mandates, including, but not limited to, the City's Progress Guide and General Plan, CEQA, and Section 106 of the NHPA of 1966. The guidelines are intended to maintain consistency in the identification, evaluation, preservation/mitigation and development (i.e., management) of the City's historical resources.

The City Historical Resources Board (HRB) was established by the City Council as an advisory board to identify, designate and preserve historic resources of the City; to review and make recommendations to the appropriate decision-making authority on applications for permits and other matters relating to the demolition, destruction, substantial alteration, removal or relocation of designated historic resources; to establish criteria and provide for a Historical Resources Inventory of properties; and to recommend to the City Council and Planning Commission procedures to facilitate the use of the inventory results in the planning process (City of San Diego 2001a). As noted in Section 3.0, *Project Description*, of this report, proposed buildings subject to SCR may also entail review by the City's HRB staff. Processing of the proposed project has involved extensive review of the design by HRB and its Design Assistance Subcommittee (DAS).

City of San Diego Progress Guide and General Plan

Cultural Resources Management Element. As stated in the land use section of this EIR, the Cultural Resources Management Element of the City's General Plan discusses archaeological and historic site preservation in San Diego. Included in the discussions are the roles and responsibilities of the Historic Sites Board, the status of cultural resource surveys, the State Historic Building Code, and other public preservation incentives and strategies. The element also includes a discussion of criteria used by the Historic Sites Board to designate landmarks in San Diego.

University Community Plan. The Institute is located within the University Community planning area; the Community Plan is a land use plan of the City's General Plan. Although the Community Plan does not contain a Preservation Element, the Institute is mentioned as being an important part of the community, both in economic terms and for its urban design qualities. Section II(A)(6) of the Resource Management Element of the Community Plan addresses cultural resources; however, this section only discusses archaeological sites and not historic resources.

5.4.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no

000812 longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

According to the City of San Diego Significance Determination Thresholds (2004d), historical or cultural resources “include all properties (historic, archaeological, landscapes, traditional, etc.) eligible or potentially eligible for the NRHP, as well as those that may be significant pursuant to state and local laws and registration programs such as the CRHR or the City of San Diego Historical Resources Register.”

Based on the current City thresholds, therefore, and the nature and location of the proposed project, project-related impacts to historical resources and historic and/or prehistoric archaeological resources are considered significant if one or more of the following conditions apply:

- The proposed project would result in a substantial alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, object or site;
- The proposed project would result in any impact to existing religious or sacred uses within the potential impact area;
- The proposed project would result in the disturbance of any human remains, including those interred outside of formal cemeteries.

Issue 1: Would the proposal result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, object or site?

Historic Resources

Rehabilitation of the Salk Institute Campus

The Institute qualifies as an historic resource under CEQA Section 15064.5(a). According to CEQA, a “project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment.” Substantial adverse change is defined as: “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially

impaired." The significance of an historic resource is materially impaired when a project "demolishes or materially alters in an adverse manner those physical characteristics that convey its historical significance" and that justify its inclusion in, or eligibility for inclusion in, the CRHR (Appendix C).

The Institute is not only a nationally and state-designated-as-eligible historic resource, but a locally recognized historic resource as well; therefore, the proposed project is required to comply with the City regulations and guidelines, discussed above, regarding such resources. The proposed project would result in the construction of several new buildings on the campus, primarily on undeveloped or underdeveloped sections of the campus earmarked by Kahn for future development or in areas that no longer retain design integrity. Although the proposed new buildings and landscape features have been or would be designed in compliance with design guidelines described in Section 3.2.3 of this EIR, some components of the proposed project would still constitute an alteration to the designated historic resources on site. New project structures, however, would be sited to minimize their visual impact on the historic Kahn-designed section of the campus and would follow his envisioned tri-partite scheme. As demonstrated below, although such impacts to historical resources would be minimized by multiple design strategies, they would still be considered significant.

The Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (Rehabilitation Standards) provide guidance for reviewing proposed work to historic properties. The Standards (see Table 5.4-1), developed by the National Park Service, are used by federal agencies and have been adopted by local governments across the country in evaluating work on historic properties. The City also uses the Rehabilitation Standards for reviewing proposed work on historic properties and determining whether proposed modifications are minor or substantial. According to the Rehabilitation Standards, rehabilitation is defined as "the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." While the Rehabilitation Standards provide a useful analytic tool for understanding and describing the potential impacts of proposed changes to historic resources, consistency with the Rehabilitation Standards does not automatically indicate a project's impact(s) would be less than significant. Rather, projects that comply with the Rehabilitation Standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on an historic resource. Alternatively, projects that are not consistent with the Rehabilitation Standards may or may not cause a substantial adverse change (i.e., significant impact) in the significance of an historic resource; potential substantial adverse changes due to inconsistency with the Rehabilitation Standards are determined on a case-by-case basis. As discussed below, in this case, the project's inconsistency would result in significant impacts prior to mitigation. Each Rehabilitation Standard is listed below in Table 5.4-1, followed by a brief discussion of each and its relationship to the proposed project. For a detailed analysis of each Rehabilitation Standard and how it applies to the proposed project, please refer to Appendix C.

Table 5.4-1

**SECRETARY OF THE INTERIOR'S STANDARDS FOR
REHABILITATION OF HISTORIC PROPERTIES**

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize the property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The proposed project is consistent with Rehabilitation Standards 1, 3 through 8, and 10, but would not be entirely consistent with Rehabilitation Standards 2 and 9 (Page and Turnbull 2007a). In a September 2006 public hearing, the HRB determined that elements of the proposed project would not be consistent with two of the Rehabilitation Standards due to impacts to historic landscaping and spatial relationships in the east parking lot (Rehabilitation Standards 2 and 9, as described below). Due to inconsistency with two of the ten Rehabilitation Standards, a Site Development Permit (SDP) would be required as discussed in Section 5.1, *Land Use*.

Additionally, an Historical Landscape Analysis was performed in which the proposed project was evaluated for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes (Cultural Landscape Standards), an alternative set of guidelines developed by the National Park Service. This analysis was necessary based on the fact that the proposed project would have a disproportionate impact on historic landscape features (i.e., replacement of the east parking lot with a new laboratory building), as

opposed to historic buildings or structures. Although the project was also evaluated according to these alternative Cultural Landscape Standards, these standards are identical to the Rehabilitation Standards and, thus, another standard-by-standard analysis was not done. Furthermore, although the Institute campus contains several significant designed, vernacular and natural landscapes within its boundaries, most of which contribute to the significance of the campus, it is ultimately an "historic district and not defined primarily as a cultural landscape" (Page & Turnbull 2007b). The original evaluation and conclusions found in the Historic Resources Technical Report and summarized in this section of the EIR, therefore, are also applicable to specific historical landscape issues.

Rehabilitation Standard 1

Although the proposed project would introduce several new use (e.g., temporary housing quarters, daycare facility, Salk Community Center Building) to the Institute campus, such uses were anticipated by Kahn in the 1961 Master Plan, would be constructed in approximately the same locations on the campus as envisioned in the 1961 Master Plan, and would not be incompatible with the mission of the Institute or the existing uses on the campus (Page & Turnbull 2007a). Furthermore, the Salk Community Center Building and the Torrey East Building would accommodate uses that are already occurring in other buildings on campus. As designed, the proposed project would be consistent with Rehabilitation Standard 1.

Rehabilitation Standard 2

The proposed project would result in the removal of the east parking lot and the temporary excavation of the north lawn; both features are original landscape elements of the 1961 Master Plan. According to Appendix C, the north lawn and mesa, as a significant part of the tri-partite scheme, was "reserved for future development" in the 1961 Master Plan. The north lawn would be restored once the proposed north lawn core facility is completed in a basement configuration beneath a portion of the lawn, thus preserving this historic open space and views of the original laboratory building from Torrey Pines Scenic Drive. While the easternmost section of the lawn would not be disturbed, the western section of the lawn would undergo temporary excavation with the only permanent change to the north lawn to include the addition of a series of light wells along the north side of the existing walkway. Fulfilling a similar function of providing natural light to subterranean facilities, the light wells would be similar yet still distinct from the existing light wells along the north wall of the original laboratory building. Once the proposed north lawn core facility is completed, the portion of the north lawn area affected by the proposed project would be regraded and replanted with lawn to match existing conditions, similar to the existing conditions on the south lawn, located atop the extant underground research facilities.

Implementation of the proposed project would result in construction of the Torrey East Building, a laboratory building, and the new below-grade parking facility on the site of the existing east parking

lot, a surface lot that would be excavated to accommodate the proposed two-level subterranean parking facility. According to the recent NRHP nomination, the east parking lot is a contributing feature of the Institute campus (Page & Turnbull 2007a). It is not identified in the nomination, however, as being one of the "four basic landscape components" which, according to the nomination text, include: "the courtyard between the two stark buildings, site perimeter planting, an extant remnant Eucalyptus grove that predated the Salk [Institute], and the native coastal bluffs." Furthermore, the sections of the nomination that discuss the east parking lot identify only the landscaping as being significant, as opposed to the hardscape of the lot. As the proposed project would result in the removal of the existing east parking lot and the construction of a new building on the same site, it would alter existing spatial relationships that characterize the original Kahn-designed section of the campus on the east mesa. Instead of a flat surface parking lot landscaped with Chinese Fringe trees, there would be a two-story laboratory building occupying the space between the East Building and North Torrey Pines Road. Although Kahn planned for future development of this section of the campus in the 1961 Master Plan, it has remained substantially the same since the Institute was built in 1965 (see Figures 5.1-1a and 5.1-1b). As designed, therefore, this portion of the proposed project would not be consistent with Rehabilitation Standard 2 due to its impact on spatial relationships.

Rehabilitation Standard 3

The proposed project would not create a false sense of historical development, and no conjectural features or elements from other historic properties would be added to the campus. The proposed buildings would be compatible with design guidelines that would assure new construction is compatible with, yet distinct from, Kahn's original design. As designed, the proposed project would be consistent with Rehabilitation Standard 3.

Rehabilitation Standard 4

Although the removal of the parking lot on the north mesa and several temporary structures would occur with implementation of the proposed project, these features have not acquired their own historic significance or been identified as contributing elements in the National Register nomination (Page & Turnbull 2007a). The proposed project, as designed, would be consistent with Rehabilitation Standard 4.

Rehabilitation Standard 5

No alterations to the distinctive, existing Kahn-designed buildings, or removal of any distinctive materials, features, finishes or examples of construction technique or craftsmanship, would occur with implementation of the proposed project. As designed, the project would be consistent with Rehabilitation Standard 5.

Rehabilitation Standard 6

Except for the basement level of the existing original laboratory building, which would be modified underground to facilitate a below-grade connection to the proposed north lawn core facility, the distinctive, existing Kahn-designed buildings would not undergo any permanent visible alterations. The Kahn-designed north lawn would be partially excavated to enable the building of the proposed north lawn core facility, but would be subsequently restored and its use as an informal recreation field by Institute employees would continue. As designed, the proposed project would be consistent with Rehabilitation Standard 6.

Rehabilitation Standard 7

No chemical or physical treatments to the existing Kahn-designed buildings would be undertaken as part of the proposed project. As designed, the project would be consistent with Rehabilitation Standard 7.

Rehabilitation Standard 8

As discussed above, a records search of the California Historical Resources Information System turned up five prehistoric archaeological sites, mostly composed of lithic scatters and middens, within a quarter-mile radius of the Salk Institute site. Although no prehistoric archaeological resources (i.e., Native American artifacts or human remains) turned up on site in the record search, and none were observed during field survey or are otherwise known to exist on site, it is possible that unknown prehistoric archaeological resources, including Native American burials, could be encountered during site preparation and grading operations. In the event that any prehistoric or archaeological resources are encountered, proper mitigation measures, as described in detail below, would be undertaken.

Historic maps of the area indicate that portions of the project site were occupied by Camp Callan in the 1930s and 1940s, thus the likelihood that World War II-era subsurface foundations or other remains (e.g., historic archaeological resources) would be encountered during site preparation, excavations and grading, especially on the north mesa, is moderate to high. The likelihood of encountering Camp Callan-related historic era archaeological resources during site preparation, grading and excavations, especially on the north mesa, is moderate to high because portions of the proposed Institute expansion would result in excavations on land that, although disturbed, was known to contain prior historic structures. Proper mitigation measures, such as the preparation of Historic American Buildings Survey (HABS) Level II documentation and other measures described below, would be undertaken in the event that such historic archaeological resource discoveries occur. As designed, the proposed project is consistent with Rehabilitation Standard 8.

Rehabilitation Standard 9

As described above, excavation to accommodate the new Torrey East Building and the subterranean parking facility would result in permanent removal of the existing asphalt parking lot, curbs and wheel stops, and the Chinese Fringe trees in the planting strips within the surface lot. The most significant feature of the existing east parking lot, according to the recently approved NRHP nomination, is the collection of Chinese Fringe trees. Furthermore, the addition of the Torrey East Building would alter existing spatial relationships on the east mesa by placing an additional building between the original laboratory building and North Torrey Pines Road.

In conjunction with the existing East Building, the proposed Torrey East Building would greatly alter the spatial relationships that originally characterized the east mesa. Although Salk and Kahn intended for this eventuality when designing the 1961 Master Plan (as shown in Figure 5.1-1a), what is currently a largely open area of surface parking lots and landscaping would be transformed into a more built-up setting under the proposed project. The impact of the new building on historic resources (i.e., spatial relationships) would be somewhat minimized, however, by the existing dense screen of perimeter plantings that line the north, south and east property boundaries and that would be retained as part of the proposed project. Additionally, the Torrey East Building would have a relatively low profile, rising to only two stories or approximately 30 feet above existing grade. Further minimizing its impact on existing spatial relationships, the building would feature a two-level transparent atrium at the center of the structure designed to be on the same axis as the courtyard of the original laboratory building (see Figure 5.2-25). These key design factors would allow users, visitors and passers-by to potentially glimpse the historic Kahn-designed laboratory building from North Torrey Pines Road and preserve this longstanding axial relationship.

With regards to its massing and orientation, the proposed Torrey East Building would be similar to the 1995 East Building in its relationship to the historic original laboratory building, although its design would be rather different. Consisting of a single horizontal bar clad in primarily glass and stainless steel wrapped tightly around a steel frame, the Torrey East Building would be accented with metal cladding and architectural concrete, for an overall effect much lighter than that of the East Building (see Figure 3-2, which contains building elevations and Figure 5.2-25, which is an illustration of the glass atrium component). The transparent atrium would preserve views westerly toward the courtyard of the original laboratory building and maximize the relationship between indoor and outdoor spaces. Glass railings enclosing the footprint of the second-floor atrium level and an internal bridge connecting the north and south ends of the building are key features that would also contribute to the overall effect of the Torrey East Building. Landscape buffers consisting of the salvaged Chinese Fringe trees would be installed along each of the building elevations, and the majority of the existing landscaping east of the proposed structure would be preserved.

Beyond these factors, the Torrey East Building has been designed to be compatible with the proposed design guidelines, which would ensure all new construction is compatible with, yet distinct from, Kahn's original designs (Appendix C). Please refer to Section 3.2.3 of this EIR for a discussion of the project design guidelines and their relationship to the individual project components.

Implementation of the proposed project would expand the existing Institute campus, bringing the total built area up to the allowable limit of 500,000 square feet. With the exception of the Torrey East Building discussed above, the proposed new buildings would be sited on parts of the campus that do not directly contribute to or subtract from the significance of the Kahn-designed original laboratory building and courtyard, and adjacent landscaping. Furthermore, the Salk Institute Master Plan has been carefully designed to place the proposed new buildings only on those sites within the campus identified in the 1961 Master Plan as being reserved for future development. The new buildings would be quite distinct from Kahn's original design theme, but their design would remain compatible with the original buildings and landscape, and their location(s) would be a deliberate attempt to honor and complete the tri-partite scheme of the unfinished 1961 Master Plan. Although the original laboratory building already is not highly visible from North Torrey Pines Road, the affected historic resource is a surface parking lot and of substantially less importance than the laboratories or other Kahn-designed landscape features; and this area of the east mesa was earmarked by Kahn as appropriate for future development, the proposed removal of the Chinese Fringe trees, original landscaping elements of the campus, would be significant. Thus, while the numerous design strategies discussed above would serve in part to minimize disruption of the original spatial relationships on site, removal of the east parking lot, an original, contributing feature of the Institute campus, would, result in a significant physical impact to an historic resource. Therefore, while the chosen siting and construction of the proposed Torrey East Building would pose the least harm to the historic portions of the campus, as designed, this component of the project is not consistent with Rehabilitation Standard 9.

Rehabilitation Standard 10

Following project implementation, it is highly unlikely that the Institute would remove any of the proposed buildings in the immediate future; however, their placement in relation to the Kahn-designed sections of the campus would allow the form and integrity of the property to be restored to its approximate present appearance should they be removed (Page & Turnbull 2007a). As designed, the proposed project would be consistent with Rehabilitation Standard 10.

Archaeological Resources

Historic Resources: Camp Callan

Historic maps indicate that approximately half of the existing Institute campus, including all of the east mesa and most of the north mesa, is located within what was once "Block 25" of Camp Callan. Block 25 included ammunition depots and other structures on the western flank of what is now the north mesa; however, the portion of former Block 25 that is now the east mesa does not appear to have included any Camp Callan structures or buildings (refer to Figure 5.4-1). As stated above, building foundations were not removed during the post-war cleanup of the camp. Although recent archaeological monitoring has not revealed the presence of any subsurface prehistoric or historic resources on the north mesa, much of the site is paved and cannot be accurately tested; thus, the potential remains moderate to high for encountering subsurface structural remains of Camp Callan (i.e., historic-era archaeological resources) during excavations for the proposed Salk Community Center Building and underground parking on the north mesa. Should World War II-era subsurface foundations remain within the development footprint, they would have to be documented and removed; such removal would constitute an adverse impact on historic-era archaeological resources.

Prehistoric Resources: Native American Artifacts

As discussed under Existing Conditions, no prehistoric archaeological resources are known to exist on the undeveloped portions of the project site. Therefore, no impacts to prehistoric resources are expected to occur. However, while the proposed project is not expected to impact any prehistoric resources, there are several known prehistoric sites within a close radius of the project site and unexpected encounters with such archaeological items are possible. As a result of this possibility, potentially significant impacts to unknown archaeological resources are identified. As noted above, City consultation with the appropriate Native American tribe(s) as part of the SB 18 process has led to the determination that there is the potential for impacts to buried archaeological resources, including Native American burials, and a Native American monitor should be present on site prior to and during grading operations. Specific monitoring provisions are contained in the mitigation language in this section to address the possibility of encountering human remains.

Significance of Impacts

According to the State CEQA Guidelines, where alterations to an historical resource will be conducted in a manner consistent with the Secretary of the Interior's Rehabilitation Standards and Guidelines (and the Cultural Landscape Rehabilitation Guidelines), the project's impact(s) on historical resources will generally be considered less than significant. Although project impacts would be minimized through various siting and design considerations as discussed, the proposed project's non-compliance with Rehabilitation Standards 2 and 9 could result in significant impacts to historic landscape

resources and spatial relationships. In addition, due to the project's potential to encounter unknown subsurface structural remains of Camp Callan (i.e., historic-era archaeological resources) and/or unknown Native American (i.e., prehistoric) archaeological resources during excavations, implementation of the proposed project could result in significant direct and indirect impacts to archaeological resources. Mitigation for impacts to designated historical and archaeological resources, in accordance with the City's Historical Resources Guidelines, is provided below.

Mitigation Measures, Monitoring and Reporting Program

The following measures would reduce potential historical resource impacts related to spatial relationships and the east parking lot landscaping, associated with Rehabilitation Standards 2 and 9, to below a level of significance.

- 5.4-1 All healthy Chinese Fringe trees shall be carefully removed from the planting beds within the existing east parking lot and replanted as part of the landscaping for the proposed Torrey East Building. The trees shall remain in proximity to their original location and provide a tangible link to the history of the site.
- 5.4-2 The landscape concept plan shall restore as much of the Institute's original perimeter plantings as possible, as shown in the Landscape Design Guidelines. The Institute shall inventory its existing perimeter plantings, assess the health of individual specimens and replant as necessary. Replanted trees, especially those surrounding the Kahn-designed portions of the Institute, shall be identical to those species originally planted and identified on the 1965 Landscape Plan, and other landscaping shall use the same "palette" of species as that identified on the 1965 Landscape Plan, to the extent practicable given existing City regulations.
- 5.4-3 The final design for the Torrey East Building shall feature a ground-level, two-story transparent atrium space designed to permit limited visibility along the same axis as the courtyard of the original laboratory building, in accordance with the Architectural Design Guidelines.

The following measures would avoid or reduce potential impacts to Camp Callan-related historic-era archaeological resources on the north mesa to below a level of significance.

5.4-4 Prior to Permit Issuance

(A) Entitlements Plan Check

1. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for archaeological monitoring have been noted on the appropriate construction documents.

(B) Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

5.4-5 Prior to Start of Construction

(A) Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (¼ mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

(B) PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
 - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
 - b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
3. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

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5.4-6 During Construction

(A) The Monitor Shall Be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.
2. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present.

(B) Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

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(C) Determination of Significance

1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
 - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.
 - c. If resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

5.4-7 Night and/or Weekend Work

(A) If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV - Discovery of Human Remains.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.

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- d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

(B) If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

(C) All other procedures described above shall apply, as appropriate.

5.4-8 Post-Construction

(A) Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring.
 - a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
 - b. Recording Sites with State of California Department of Parks and Recreation
The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.

4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

(B) Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
3. The cost for curation is the responsibility of the property owner.

(C) Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

(D) Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

The following measures would avoid or reduce potential impacts to unknown prehistoric archaeological resources on the project site to below a level of significance.

5.4-9 Prior to Permit Issuance

(A) Entitlements Plan Check

1. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for archaeological monitoring and Native American monitoring have been noted on the appropriate construction documents.

(B) Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the monitoring program.

5.4-10 Prior to Start of Construction

(A) Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (¼ mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

(B) PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
 - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
 - b. The AME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
3. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
 - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate site conditions such as depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

5.4-11 During Construction

(A) The Monitor Shall Be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full-time during grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The Native American monitor shall determine the extent of their presence during construction related activities based on the AME and provide that information to the PI and MMC. The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.
2. The monitor shall document field activity via the Consultant Site Visit Record (CSV). The CSV's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered may reduce or increase the potential for resources to be present.

(B) Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

(C) Determination of Significance

1. The PI AND Native American Monitor shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in MM 5.4-11 below.

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- a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
 - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval from MMC. Impacts to significant resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.
 - c. If resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.

5.4-12 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and the following procedures as set forth in the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

(A) Notification

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS).
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

(B) Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

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- (C) If Human Remains ARE determined to be Native American
1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
 2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
 3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with the California Public Resource and Health & Safety Codes.
 4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
 5. Disposition of Native American Human Remains shall be determined between the MLD and the PI, IF:
 - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission; OR;
 - b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner.
 - c. In order to protect these sites, the Landowner shall do one or more of the following:
 - (1) Record the site with the NAHC;
 - (2) Record an open space or conservation easement on the site;
 - (3) Record a document with the County.
 - d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.
- (D) If Human Remains are NOT Native American
1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
 2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
 3. If the remains are of historic origin, they shall be appropriately removed and

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conveyed to the Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner and the Museum of Man.

5.4-13 Night and/or Weekend Work

(A) If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon Meeting.
2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVr and submit to MMC via fax by 8AM of the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV - Discovery of Human Remains.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
 - d. The PI shall immediately contact MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

(B) If night and/or weekend work becomes necessary during the course of construction

1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
2. The RE, or BI, as appropriate, shall notify MMC immediately.

(C) All other procedures described above shall apply, as appropriate.

5.4-14 Post-Construction

(A) Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring.
 - a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program shall be included in the Draft Monitoring Report.
 - b. Recording Sites with State of California Department of Parks and Recreation
The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

(B) Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

3. The cost for curation is the responsibility of the property owner.

(C) Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

(D) Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.
2. The RE shall, in no case, issue the Notice of Completion and/or release of the Performance Bond for grading until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

Issue 2: Would the proposal result in any impact to existing religious or sacred uses within the potential impact area?

Issue 3: Would the proposal result in the disturbance of any human remains, including those interred outside of formal cemeteries?

As discussed under Existing Conditions, no prehistoric archaeological resources associated with religious or sacred uses, or human remains, are expected to occur on the undeveloped portion of the site. Therefore, while the proposed project is not expected to impact any religious or sacred uses or disturb any human remains, unexpected encounters with archaeological resources associated with religious or sacred uses, or with Native American remains are possible based on information obtained from the Native American community. As a result of this possibility, a Native American monitor is required to be present prior to and during project grading and specific provisions for the discovery of human remains are contained in those monitoring measures. See mitigation measures 5.4-7-8 through 5.4-12-14 for additional information about Native American monitoring.

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Significance of Impacts

Based on the conclusions discussed above, no significant impacts to existing religious/sacred uses are anticipated; however, the potential exists for significant impacts to buried human remains based on City consultation with the Native American community.

Mitigation Measures, Monitoring and Reporting Program

No additional mitigation beyond that identified in measures 5.4-7-8 through 5.4-12-14 is required.

5.5 TRAFFIC/CIRCULATION

Urban Systems Associates, Inc. (USAI) prepared a transportation analysis for the Salk Institute (Institute) project in September 2006. The analysis evaluated the proposed project's impact on traffic and circulation on the area street system. The transportation analysis is attached in its entirety as Appendix D to this EIR. The results and conclusions of the analysis are summarized below.

5.5.1 Existing Conditions

Regional and Local Roadway Network

The proposed project is located west of North Torrey Pines Road between Torrey Pines Scenic Drive and Salk Institute Road. The project site fronts on North Torrey Pines Road, Torrey Pines Scenic Drive and Salk Institute Road; local access to the site is available from Torrey Pines Scenic Drive and Salk Institute Road only. Regional access to the site is available from Interstate-5 (I-5) via its interchange with Genesee Avenue. Figure 5.5-1, *Project Area Streets and Intersections*, shows the existing roadway network in the project area, which is comprised of a freeway, prime arterials, a major road, and several local collector roads, as described below under Existing Street Segment Operations.

Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. LOS conditions for freeway LOS F are also presented in Table 5.5-1, *LOS Definitions Street and Freeway Segments*.

Table 5.5-1
LOS DEFINITIONS
STREET AND FREEWAY SEGMENTS

LOS	Congestion/Delay	Traffic Description
A	None	Free flow
B	None	Free to stable flow, light to moderate volumes
C	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver
E	Substantial	Extremely unstable flow, maneuverability and psychological comfort extremely poor
F	Considerable	Forced or breakdown flow, delay measured in average travel speed, signalized segments experience delays of more than 60 seconds per vehicle
F ₀ ⁺	Considerable, 0- to 1-hour delay	Forced flow, heavy congestion, long queues from behind breakdown points, stop and go
F ₁ ⁺	Severe, 1- to 2-hour delay	Very heavy congestion, very long queues
F ₂ ⁺	Very severe, 2- to 3-hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods

Source: USAI 2006

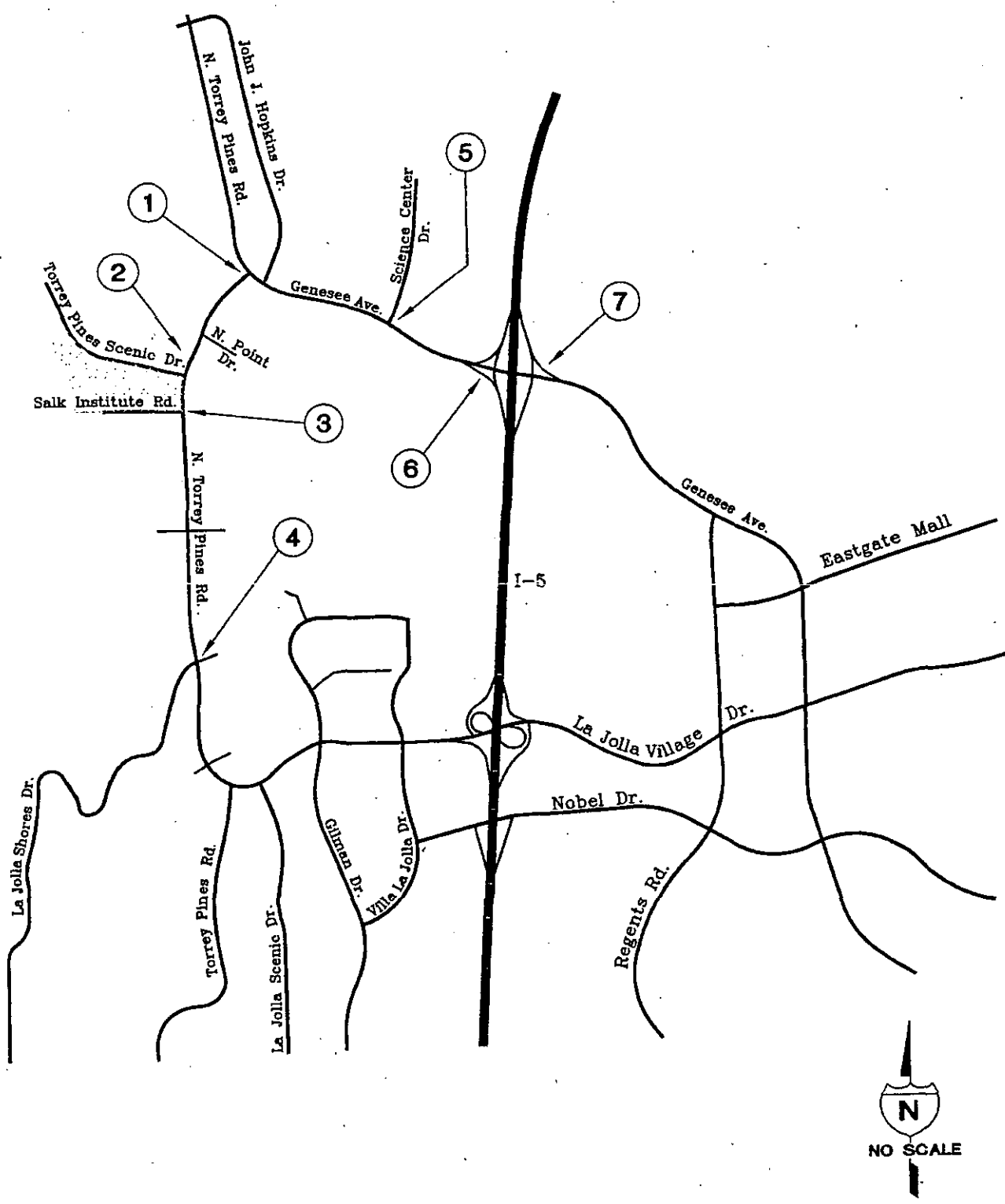
⁺ Applies to freeways only

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 16 of the 2000 Highway Capacity Manual (HCM 2000), with the assistance of the *Synchro* (version 5) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. Signalized intersection calculation worksheets and a more detailed explanation of the methodology are contained in Appendix D.

The City of San Diego Regional Congestion Management Program (CMP) guidelines, as adopted by the San Diego Association of Governments (SANDAG), determine the procedures to be used for intersection peak hour analysis. The CMP requires an Enhanced CEQA Review for projects that are expected to generate more than 2,400 average daily trips (ADT) or more than 200 peak hour trips. The City's Traffic Impact Study Manual contains criteria which establish that a project impact is considered significant if the travel speed along an arterial segment, operating at LOS E or lower (with project), decreases by more than one mile per hour.

Street segment analysis is based upon the comparison of average daily traffic volumes (ADTs) to the City of San Diego's Roadway Classification, LOS, and ADT Table. The ADT table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The City's Roadway Classification, LOS, and ADT Table are contained in Appendix D.

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Source: Urban Systems Associates, Inc.

Project Area Streets and Intersections
SALK INSTITUTE
Figure 5.5-1

Existing Street Segment Operations

The project study area is comprised of a number of street segments, which are described below. The existing operations of those street segments are presented after their description.

North Torrey Pines Road – The project site fronts on North Torrey Pines Road, which forms its eastern boundary. North Torrey Pines Road currently exists as a six-lane prime arterial north of North Point Drive and a four-lane major road south of North Point Drive.

Genesee Avenue – Genesee Avenue intersects North Torrey Pines Road to the north of the proposed project site. Genesee Avenue currently exists as a six-lane prime arterial in the vicinity of the proposed project.

Torrey Pines Scenic Drive – The project site also fronts on Torrey Pines Scenic Drive, which forms its northern boundary. Access to the site is available from this roadway. Torrey Pines Scenic Drive is a two-lane collector. Street parking is allowed along both sides of the road.

Salk Institute Road – The project site fronts on Salk Institute Road, which forms its southern boundary. Access to the site is also available from this roadway. Salk Institute Road is a two-lane sub-collector.

La Jolla Shores Drive – La Jolla Shores Drive intersects with North Torrey Pines Road approximately three-quarters of a mile south of the project site. La Jolla Shores Drive currently exists as a two-lane collector.

The existing street segment ADT and LOS in the vicinity of the project site are shown in Table 5.5-2, *Existing Street Segment ADT and LOS*, and on Figure 5.5-2, *Existing Average Daily Traffic Volumes*. As can be seen in Table 5.5-2, all street segments operate at LOS D or better under existing conditions.

Existing Intersection Operations

The City and CMP guidelines, as adopted by SANDAG, determine the procedures to be used for intersection peak hour analysis. Peak periods occur between 6:00 and 9:00 AM and 3:00 and 6:00 PM. To determine an intersection peak hour LOS, the CMP guidelines require use of the 'operational method' from Chapter 9 of the Highway Capacity Manual (HCM; Transportation Research Board 2000). The operational method determines LOS based on total vehicle delay (expressed in seconds). The City and CMP guidelines have established LOS D or better as the objective for intersections. The intersection locations that were evaluated in the traffic analysis are shown on Figure 5.5-1. The existing street intersection conditions are summarized in Table 5.5-3, *Existing Street Intersection*

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Operations. As can be seen from this table, all intersections operate at LOS C or better under existing conditions.

Table 5.5-2
EXISTING STREET SEGMENT ADT AND LOS

Street	Segment	Lanes	Classification	Capacity ¹	ADT	LOS
North Torrey Pines Rd	North of Genesee Ave	6	Prime	60,000	29,834	B
	Genesee Ave–Torrey Pines Scenic Dr	6	Prime	60,000	18,228	A
	Torrey Pines Scenic Dr–Salk Institute Rd	4	Major	40,000	17,058	B
	Salk Institute Rd – La Jolla Shores Dr	4	Major	40,000	21,595	C
	South of La Jolla Shores Dr	4	Major	40,000	19,900	B
La Jolla Shores Dr	South of North Torrey Pines Rd	2	Collector	15,000	11,813	D
Torrey Pines Scenic Dr	West of North Torrey Pines Rd	2	Collector	10,000	4,764	B
Salk Institute Rd	West of North Torrey Pines Rd	2	Sub-collector	2,200	1,201	u.c. ²
Genesee Ave	North Torrey Pines Rd–Science Center Dr	6	Prime	60,000	39,578	C
	Science Center Dr – I-5	6	Prime	60,000	43,848	C

Source: USAI 2006

¹ City of San Diego, Traffic Impact Study Manual, Table 2, July 1998, Capacity at LOS E.

² u.c. = Under Capacity

Table 5.5-3
EXISTING STREET INTERSECTION OPERATIONS

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec ⁺)	LOS	Delay (sec ⁺)	LOS
North Torrey Pines Rd / Genesee Ave	15.5	B	16.4	B
North Torrey Pines Rd / Torrey Pines Scenic Dr	7.9	A	13.9	B
North Torrey Pines Rd / Salk Institute Rd	4.4	A	5.8	A
North Torrey Pines Rd / La Jolla Shores Dr	31.3	C	34.3	C
Genesee Ave / Science Center Dr	8.1	A	25.1	C

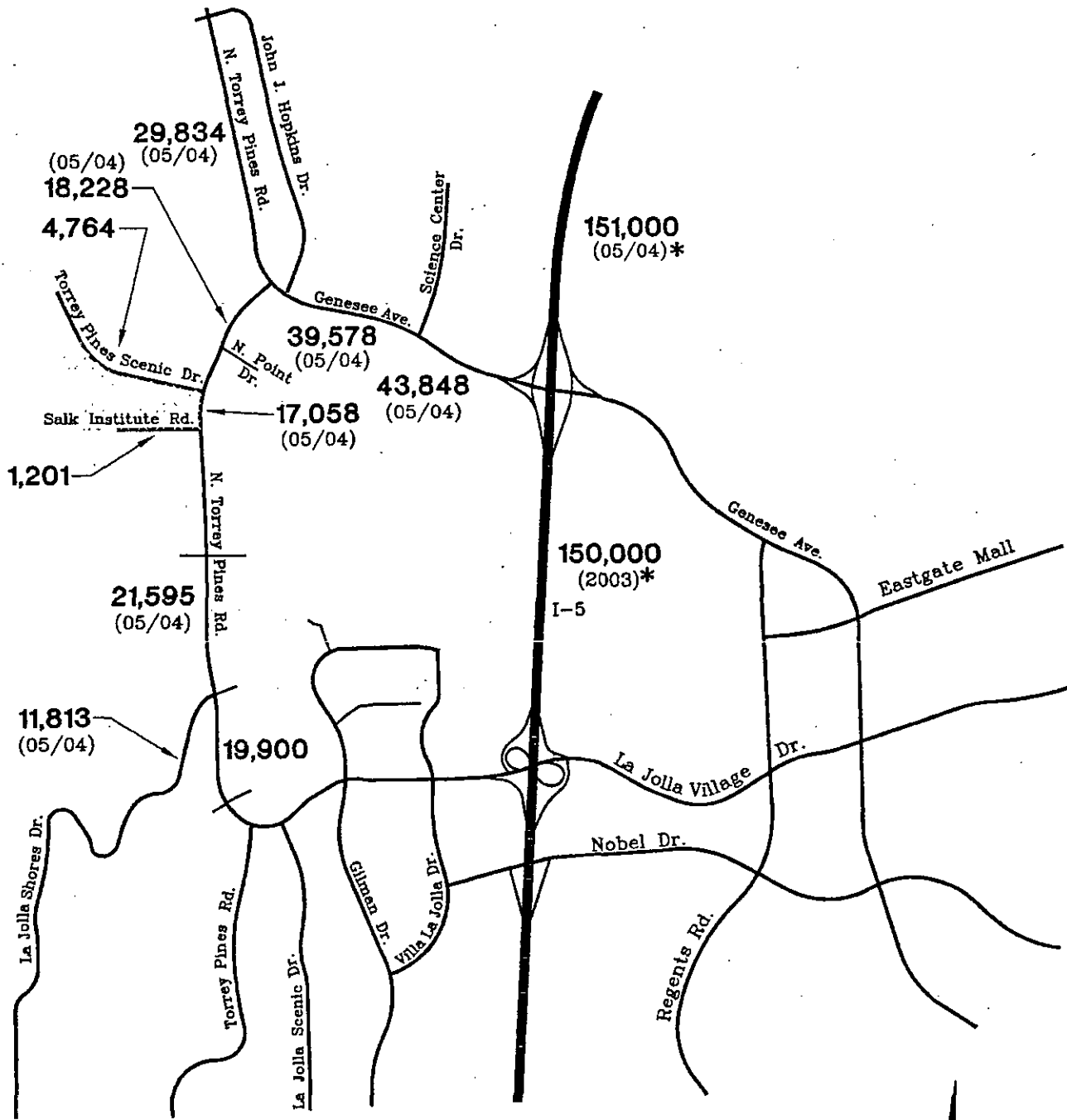
Source: USAI 2006

⁺ sec = seconds

Existing Freeway Segment Operations

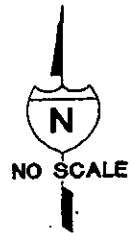
To determine the LOS of main lane freeway segments, Caltrans Guide for Preparation of Traffic Impacts Studies (2002) specifies the use of the HCM 2000 operational analysis, which determines LOS based on density of vehicles (expressed in passenger cars per mile per lane). The existing LOS for I-5 segments in the vicinity of the project site are shown in Table 5.5-4, *Existing I-5 Segment ADT and LOS*. As can be seen from this table, the Genesee Avenue/I-5 freeway segments operate at LOS D or better under existing conditions.

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LEGEND

- (XX/XX) = Count Date
- * = Taken from Caltrans website



Source: Urban Systems Associates, Inc.

Existing Average Daily Traffic Volumes

SALK INSTITUTE
Figure 5.5-2

Table 5.5-4
 EXISTING I-5 SEGMENT ADT AND LOS

Segment	No. of Lanes	Capacity ¹	ADT	Peak Hour Volume		LOS	
				AM	PM	AM	PM
North of Genesee Ave. NB ²	4	8,000	151,000	5,013	6,091	B	C
North of Genesee Ave. SB ³	4	8,000	151,000	6,645	5,189	D	C
South of Genesee Ave. NB	4	8,000	150,000	4,979	6,051	B	C
South of Genesee Ave. SB	4	8,000	150,000	6,601	5,154	D	C

Source: USAI 2006

¹ Capacity at LOS E for basic freeway segments in 2,350 passenger cars/mile/lane

² NB = northbound; ³ SB = southbound

Existing Freeway Interchange Operations

As is the case for street intersection operations, existing freeway interchange operations were determined using the operational method outlined in Chapter 9 of the HCM 2000. The existing LOS for freeway segments in the vicinity of the project site is shown in Table 5.5-5, *Existing I-5 Interchange LOS*. As can be seen in the table, both directions on the I-5 interchange operate at LOS D or better under existing conditions.

Table 5.5-5
 EXISTING I-5 INTERCHANGE LOS

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec ⁺)	LOS	Delay (sec ⁺)	LOS
I-5 southbound (SB) on-/off-ramps/Genesee Ave	42.4	D	21.3	C
I-5 northbound (NB) on-/off-ramps/Genesee Ave	39.3	D	25.2	C

Source: USAI 2006

⁺ sec=seconds

Peak Hour Ramp Meter Operations

To determine the effectiveness of ramp meter operations, the Caltrans Guide for the preparation of Traffic Impact Studies (December 2002) states that Caltrans ramp metering guidelines should be used. The most recent version of these guidelines can be found in the 2002 CMP update (January 2003). The measure of effectiveness for ramp meters using Caltrans methodology is expressed as average delay per vehicle (measured in minutes) and queue length, which is the length of the line of cars backed up behind the ramp meter (measured in feet). There are currently no ramp meters in the project study area.

Existing Parking Supply

A total of 604 surface parking spaces are currently provided on the Institute campus. Under CDP No. 90-1140, which is an amendment to CUP No. 3841 adopted May 30, 1991, 580 spaces are required. Thus, the total number of spaces onsite exceeds the minimum number required by existing permits by 24 spaces.

Transportation Demand Management Plan

The purpose of a Transportation Demand Management Plan (TDM) is to reduce project-related traffic impacts on the street and highway system by reducing the number of new trips made during the AM/PM peak periods. It is during these peak periods that overall traffic demand is highest and impacts to the street and highway system are the greatest. Outside of these peak periods, the system usually has excess capacity compared to demand. Therefore, most TDM measures concentrate on reducing the travel demand during these impacted peak hours. While several bus routes serve the area and bike lanes are present on several of the main arterials in the study area, the Institute also has a TDM plan in place to reduce its employees' contribution to traffic impacts in the area. See Appendix Q of the Transportation Analysis (USAI; Appendix D) for more information on the Institute TDM.

5.5.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

The City of San Diego's Significance Determination Thresholds (2004b) state that transportation/circulation impacts would be significant under CEQA if:

- Any intersection, roadway segment, or freeway segment affected by a project would operate at LOS E or F under either direct or cumulative conditions and the project exceeds the thresholds shown in Table 5.5-6, *Allowable Change Due to Project Impact*.
- At any ramp meter location with delays above 15 minutes, the project exceeds the thresholds shown in Table 5.5-6.

- A project would add a substantial amount of traffic to a congested freeway segment, interchange or ramp as shown in Table 5.5-6.
- A project would increase traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway).
- A project would result in the construction of a roadway which is inconsistent with the general plan and/or a community plan and would not properly align with other existing or planned roadways.
- A project would result in a substantial restriction in access to publicly or privately owned land.
- The project's parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking.
- The parking deficiency would severely impede the accessibility of a public facility, such as a park or beach.

Table 5.5-6
ALLOWABLE CHANGE DUE TO PROJECT IMPACT¹

LOS with Project ²	Roadway Segment Decreased Speed (mph ³)	Freeway Segment Decreased Speed (mph)	Intersections Increased Delay (sec ⁴)	Ramp Metering Increased Delay (sec)
E (or ramp meter delays of more than 15 minutes)	1.0	1.0	2.0	2.0
F (or ramp meter delays of more than 15 minutes)	0.5	0.5	1.0	1.0

Source: USAI 2006

¹ If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant.

² The acceptable LOS for freeways, roadways and intersections is generally "D". For metered freeway ramps, LOS does not apply; however, ramp meter delays above 15 minutes are considered excessive.

³ mph = miles per hour

⁴ sec = seconds

Issue 1: Would the proposal result in traffic generation in excess of specific allocations in the community plan?

Issue 2: Would the proposal result in an increase in project traffic that is substantial in relation to the existing traffic load and capacity of the street system?

Neither the Transportation Element of the City of San Diego *Progress Guide and General Plan* (General Plan) nor the *University Community Plan* (Community Plan) provide specific traffic generation allocations; however, the City requires evaluation of a specific project's traffic impacts based upon pre-established guidelines for allowable change. Table 5.5-6 summarizes the allowable change due to project impacts to street and freeway segments as well as the allowable change in delay at street/freeway intersections and ramp metering.

In order to determine specific (quantitative) project impacts to existing traffic load and street system capacity, an analysis of both the anticipated project trip generation and distribution as well as an impact analysis of the Near Term scenario with and without the project was performed. The Near Term scenario considers traffic conditions occurring over the next several years where traffic from other known development projects in the area are added to existing traffic levels.

Project Trip Generation

The trip generation rate defined in the City's May 2003 Trip Generation Manual was used to determine the ADT and peak hour trip generation for both the existing facility and the proposed project. The trip generation rate is based upon the number of trips per 1,000 square feet (sf). Assuming that 100 percent of the proposed square footage would generate new traffic, the proposed project would generate 1,682 new ADT, including 270 AM peak hour trips and 236 PM peak hour trips (Table 5.5-7, *Maximum Future Project Daily Trip Generation*). While the proposed project ADT would be below the CMP threshold of 2,400 ADT, the project would generate AM and PM peak hour trips that would exceed the CMP peak hour trip threshold of 200, thereby requiring evaluation of the project pursuant to requirements of the Regional CMP. This approach is a conservative estimate of project traffic, as square footage associated with the daycare facility, greenhouses and the dining portion of the Salk Community Center Building would not generate trips since they would serve existing employees. Thus, this conservative approach produces trips rates that are approximately 15 percent higher than the traffic volumes if each individual use were counted separately (see Table 2-1 in Appendix D for a trip generation comparison).

Table 5.5-7
MAXIMUM FUTURE PROJECT DAILY TRIP GENERATION^{1,2}
(ASSUMES 100% OF SQUARE FOOTAGE)

Use	Size (sf)	ADT	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Scientific Research	210,200 ³	1,682	243	27	270	24	212	236

Source: USAI 2006

Notes:

¹ Trip generation volume assumes all new building square footage would contribute trips, when in reality the daycare facility, greenhouses and dining space and other support uses within the Salk Community Center Building would not generate new trips.

² Rates as stated in the City of San Diego Trip Generation Manual, May 2003.

³ Excludes 29,000 s.f. of new building space that would be offset by 29,000 s.f. of demolition.

Regardless of how the trip rates are calculated, the proposed project would not generate more trips than assumed in the Community Plan since the total proposed net building square footage (210,200 sf) combined with the existing space on site that would remain after 29,000 sf of planned demolitions (289,800 sf) would equate to 500,000 sf, which is the allowable density for the site as listed in the Development Intensity Element of the Community Plan. Therefore, the proposed project would not produce traffic in excess of the assumptions contained in the Community Plan.

Project Trip Distribution

Project trip distribution percentages are illustrated on Figure 5.5-3, *Project Distribution Percentages*. Projected trips were distributed based on the SANDAG Series 10 Select Zone assignment, existing traffic flow on city streets and city staff review/refinement. The majority (74 percent) of trips to and from the project site would be from the north on North Torrey Pines Road. The trip distribution to and from the south on North Torrey Pines Road would be 26 percent. Figure 5.5-4, *Project Only Average Daily Traffic*, shows the project ADT distribution.

Near Term (Year 2006) Scenario

To determine the Near Term traffic volumes, all other proposed or approved projects that would have impacts within the project study area were identified. According to City staff, there is one other project that may have impacts within the project study area--the 2004 Long Range Development Plan (LRDP) for UCSD. According to the 2004 LRDP traffic study, there will be an additional 17,400 ADT in the 2005-2006 school year, including 1,600 AM peak hour trips and 1,700 PM peak hour trips. Project only volumes for the 2004 LRDP were extracted from the traffic section of the 2004 LRDP EIR and applied to existing traffic volumes to calculate Near Term 'other projects' volumes.

The Near Term With Project traffic conditions were determined by combining the project only volumes with the Near Term Without Project volumes.

Near Term Street Segment Operations

The daily traffic volume from other area projects (i.e., UCSD trips) on roadways in the vicinity of the proposed project plus existing traffic are shown in Figure 5.5-5, *Near Term Without Project Average Daily Traffic*. Table 5.5-8, *Near Term (Year 2006) Street Segment Operations*, shows the Near Term street segment ADT and LOS, which includes projected traffic from other projects only, namely the 2004 UCSD LRDP, as well as project traffic. As can be seen in Table 5.5-8, under the Near Term Without Project condition, all street segments would operate at LOS D or better. With the proposed project in place, the LOS for Torrey Pines Scenic Drive would change from LOS B to LOS C, and all other street segments would continue to operate at LOS D or better. Figure 5.5-6, *Near Term With Project Average Daily Traffic*, shows the near term trips with the project in place.

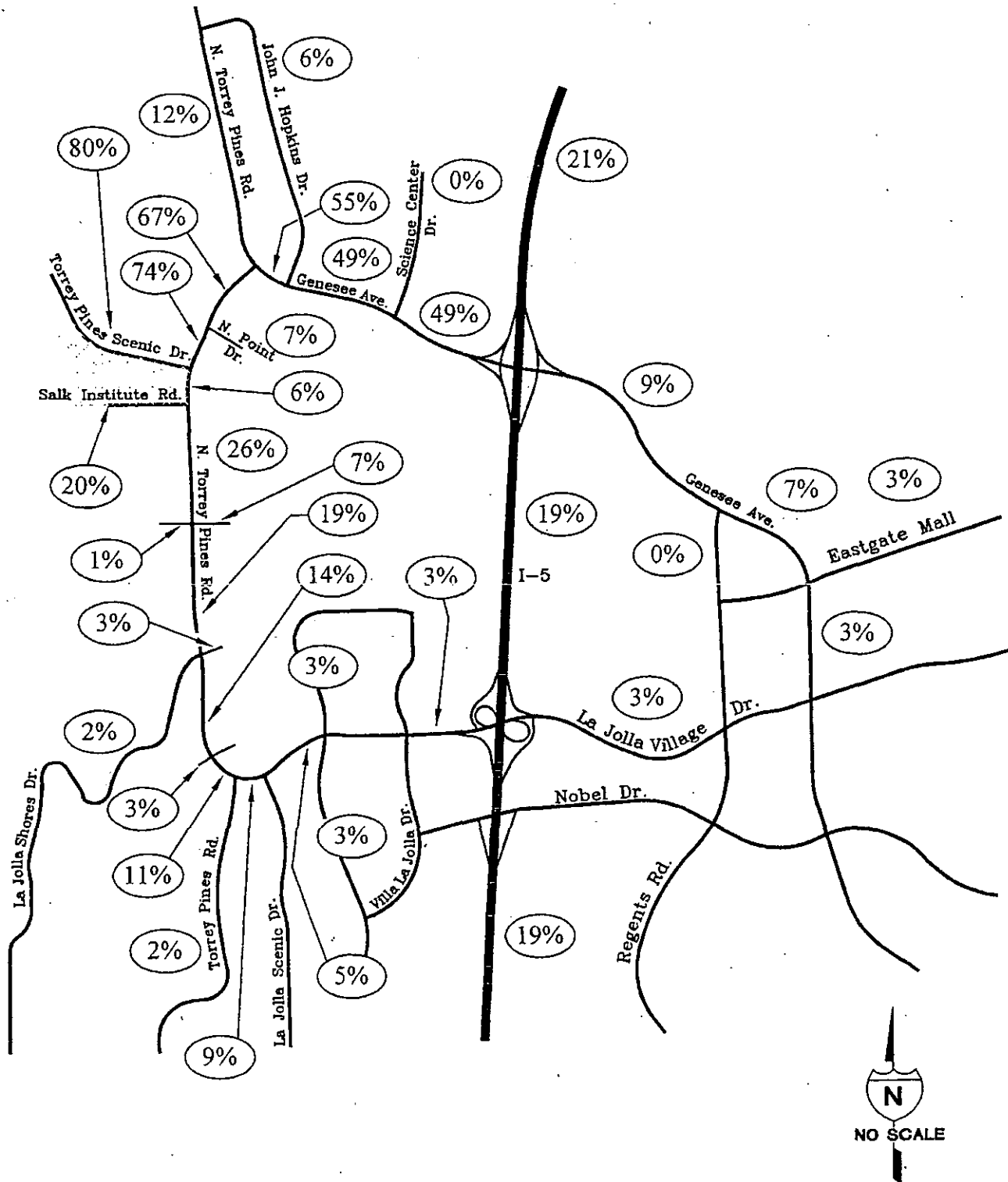
Near Term Street Intersection Operations

Table 5.5-9, *Near Term (Year 2006) Intersection Operations*, shows the Near Term Street Intersection LOS with and without the proposed project. The without project condition includes projected traffic from the 2004 UCSD LRDP. As can be seen in Table 5.5-9, under the Near Term Without Project condition, all street intersections would operate at LOS C or better. With the proposed project in place, all study intersections would continue to operate at LOS C or better, with the exception of the intersection of North Torrey Pines Road at La Jolla Shores Drive, which would drop from LOS C to LOS D.

Near Term Freeway Segment Operations

Table 5.5-10, *Near Term (Year 2006) I-5 Segment ADT and LOS*, shows the Near Term conditions along segments of I-5 with and without the proposed project. As can be seen in Table 5.5-10, under the Near Term Without Project condition, all I-5 segments north and south of Genesee Avenue would operate at LOS D or better. Under the Near Term With Project condition, ADT and peak hour volumes would increase, but all I-5 segments would continue to operate at LOS D or better and the City threshold of 1.0 mph would not apply.

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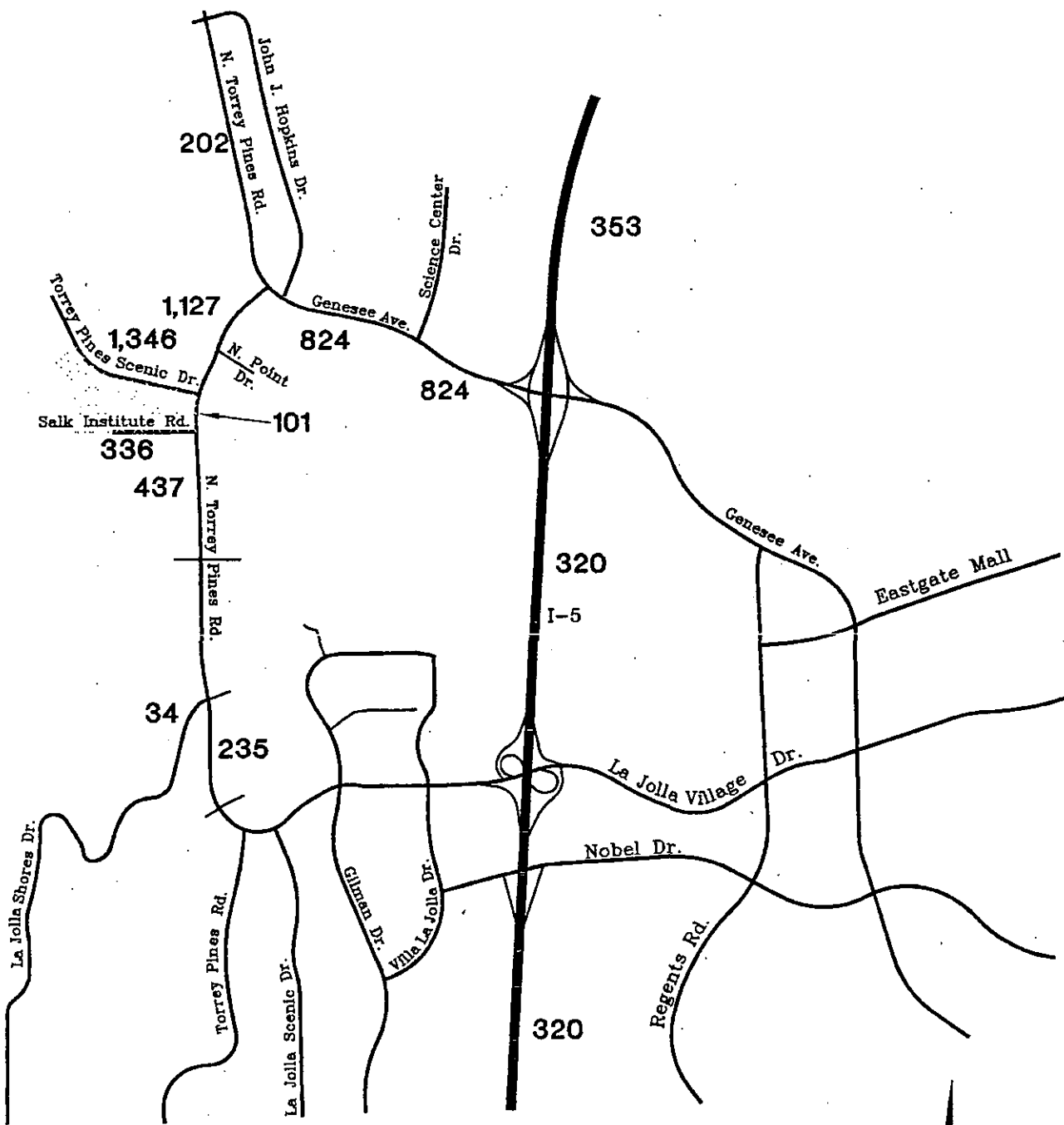
Source: Urban Systems Associates, Inc.

Project Distribution Percentages

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Figure 5.5-3

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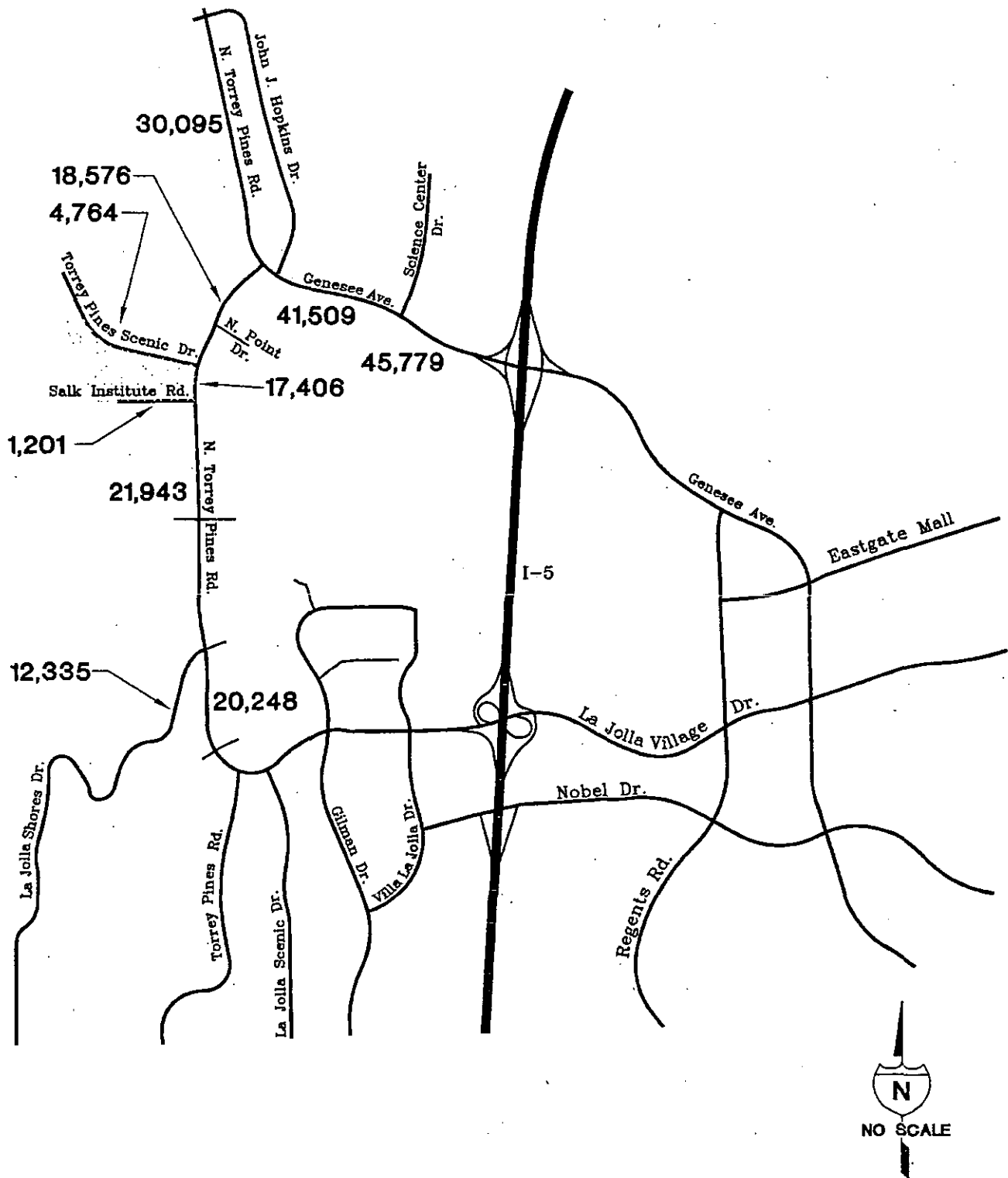
Source: Urban Systems Associates, Inc.

Project Only Average Daily Traffic

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Figure 5.5-4

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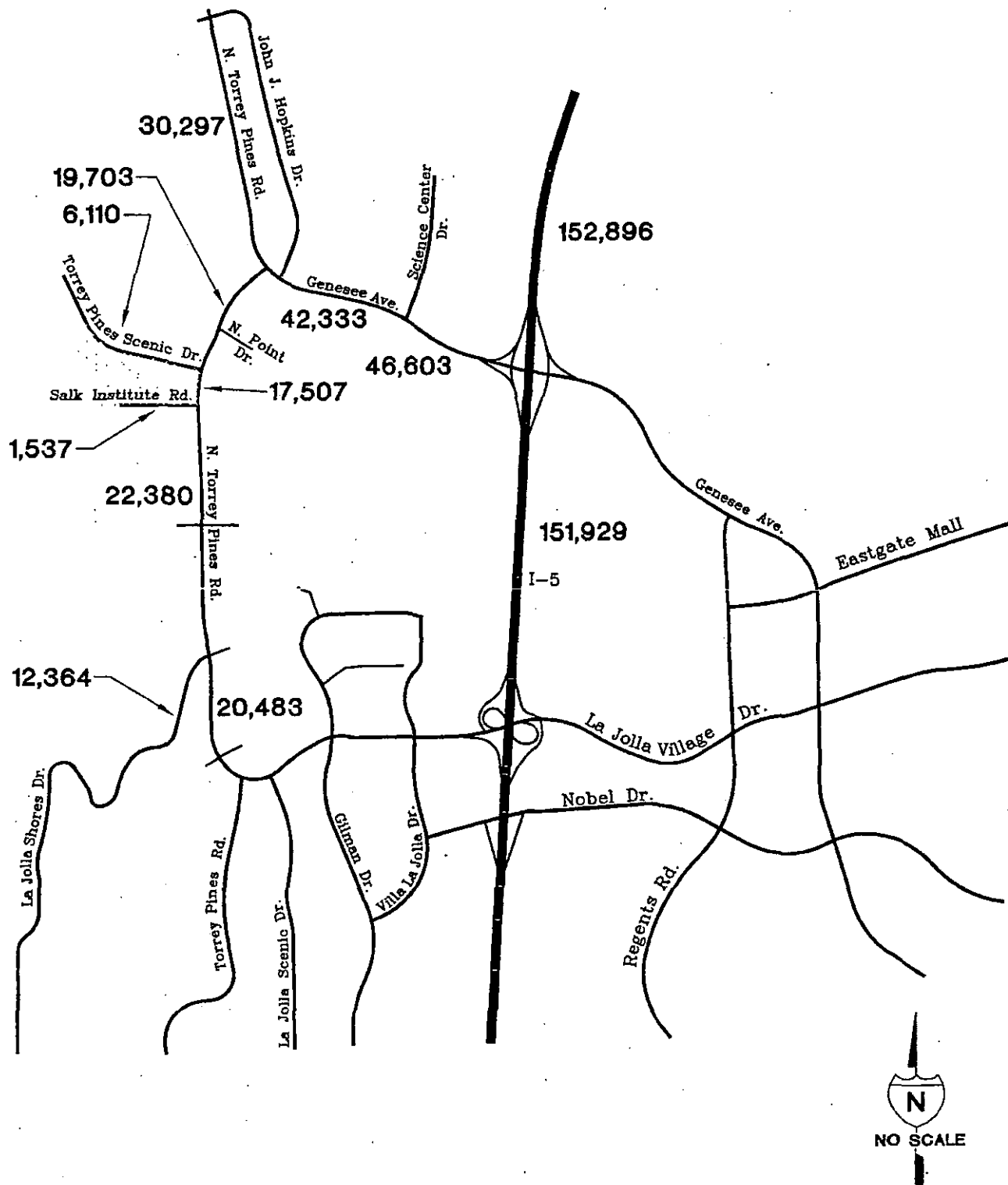
Source: Urban Systems Associates, Inc.

Near Term Without Project Average Daily Traffic

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Figure 5.5-5

000852



Source: Urban Systems Associates, Inc.

Near Term With Project Average Daily Traffic

SALK INSTITUTE

Figure 5.5-6

000553

**Table 5.5-8
NEAR TERM (YEAR 2006)
STREET SEGMENT OPERATIONS**

Street	Segment	Lanes	Classification	Capacity*	Without Project		With Project	
					ADT	LOS	ADT	LOS
North Torrey Pines Rd	North of Genesee Ave	6	Prime	60,000	30,095	B	30,297	B
	Genesee Ave-Torrey Pines Scenic Dr	6	Prime	60,000	18,576	A	19,203	A
	Torrey Pines Scenic Dr-Salk Institute Rd	4	Major	40,000	17,406	B	17,507	B
	Salk Institute Rd-La Jolla Shores Dr	4	Major	40,000	21,943	C	23,380	C
	South of La Jolla Shores Dr	4	Major	40,000	20,248	B	20,483	B
La Jolla Shores Dr	South of North Torrey Pines Rd	2	Collector	15,000	12,335	D	12,366	D
Torrey Pines Scenic Dr	West of North Torrey Pines Rd	2	Collector	10,000	4,764	B	6,110	C
Salk Institute Rd	West of North Torrey Pines Rd	2	Sub-collector	2,200	1,201	u.c.	1,537	u.c.
Genesee Ave	North Torrey Pines Rd-Science Center Dr	6	Prime	60,000	41,509	C	42,333	C
	Science Center Dr-I-5	6	Prime	60,000	45,779	C	46,600	C

Source: USAI 2006

* City of San Diego, Traffic Impact Study Manual, Table 2, July 1998, Capacity at LOS E.

**Table 5.5-9
NEAR TERM (YEAR 2006)
INTERSECTION OPERATIONS**

Intersection	Without Project				With Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec ⁺)	LOS	Delay (sec ⁺)	LOS	Delay (sec ⁺)	LOS	Delay (sec ⁺)	LOS
North Torrey Pines Rd / Genesee Ave	15.6	B	16.9	B	17.1	B	17.8	B
North Torrey Pines Rd / Torrey Pines Scenic Dr	8.1	A	13.5	B	9.0	A	16.5	B
North Torrey Pines Rd / Salk Institute Rd	4.4	A	5.8	A	7.0	A	8.2	A
North Torrey Pines Rd / La Jolla Shores Dr	32.5	C	34.9	C	33.5	C	35.2	D
Genesee Ave / Science Center Dr	8.2	A	26.0	C	8.3	A	26.8	C

Source: USAI 2006

⁺ sec=seconds

000054

Table 5.5-10
NEAR TERM (YEAR 2006)
I-5 SEGMENT ADT AND LOS

Segment	No. of Lanes	Capacity ¹	ADT	Peak Hour Volume		LOS	
				AM	PM	AM	PM
Without Project							
North of Genesee Ave. NB	4	8,000	152,576	5,065	6,155	C	C
North of Genesee Ave. SB	4	8,000	152,576	6,714	5,243	D	C
South of Genesee Ave. NB	4	8,000	151,576	5,032	6,114	B	C
South of Genesee Ave. SB	4	8,000	151,576	6,670	5,208	D	C
With Project							
North of Genesee Ave. NB	4	8,000	152,896	5,076	6,168	C	C
North of Genesee Ave. SB	4	8,000	152,896	6,728	5,254	D	C
South of Genesee Ave. NB	4	8,000	151,929	5,043	6,129	C	C
South of Genesee Ave. SB	4	8,000	151,929	6,685	5,221	D	C

Source: USAI 2006

¹ Capacity at LOS E for basic freeway segments in 2,350 passenger cars/hour/lane

Near-Term Freeway Intersection Operations

Table 5.5-11, *Near Term (Year 2006) I-5 Intersection Operations*, shows the Near Term Freeway intersection LOS for the without project and with project conditions. As shown in Table 5.5-11, the addition of traffic from other projects (i.e., the UCSD LRDP) to existing traffic would result in a LOS D on southbound on- and off-ramps during the AM peak under the Near Term Without Project condition; all other intersections continue to operate at acceptable levels of service. All I-5 intersections would continue to operate at LOS D or better under the Near Term With Project condition, with the exception of I-5 northbound during the AM peak period, which would continue to operate at LOS E. Therefore, the addition of the proposed project would not cause any LOS to change and the change in delay would not exceed the City's 2.0-second threshold.

Table 5.5-11
NEAR TERM (YEAR 2006)
I- 5 INTERSECTION OPERATIONS

Intersection	Without Project				With Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
I-5 SB on-/off-ramps / Genesee Ave	48.2	D	26.3	C	48.9	D	28.8	C
I-5 NB on-/off-ramps / Genesee Ave	65.7	E	28.7	C	67.5	E	31.3	C

Source: USAI 2006

Significance of Impact

The proposed project would not substantially modify conditions along roadway segments, street intersections or freeway segments in the project study area; therefore, no significant impacts are identified for those facilities. Despite the fact that the Near Term With Project condition would result in a continued LOS E for the I-5/Genesee Avenue northbound on- and off-ramp during the AM peak period, the proposed project would only add 1.8 seconds to the total peak hour delay at that ramp, which is below the significance threshold of 2.0 seconds set by the City and stated in Table 5.5-6. Therefore, no significant direct project impacts would occur. The project's contribution to cumulative impacts would be considered less than significant and is discussed below under Issue 3 and in Section 7.0, *Cumulative Impacts*, of this report.

Mitigation Measures, Monitoring and Reporting Program

No significant project impacts are identified. Therefore, no mitigation measures are required.

Issue 3: What direct and/or cumulative traffic impacts would the project have on the existing and planned community and regional circulation networks?

Buildout (Year 2030) Scenario

In order to determine project impacts on existing and planned circulation networks, the traffic analysis studied two different buildout scenarios: one that included the project and one that did not. The term 'buildout' refers to conditions in the distant future; for modeling purposes, the buildout analysis year is 2030. Under this modeling scenario, complete buildout of the Community Plan area is assumed, which would include an assumed total of 500,000 sf at the Institute and complete buildout of the UCSD campus. In addition, the model assumed that no new roads or connections would be constructed in the study area for the 2030 scenario, which is consistent with the Community Plan.

The Buildout Without Project traffic volumes were based on the SANDAG Transportation Forecast Model, which was adjusted to reflect the expected trips from the project site. Because the maximum allowable square footage for the Institute (i.e., 500,000 sf) is assumed in the SANDAG Transportation Forecast Model, the Buildout Without Project condition was determined by subtracting project traffic from the Buildout With Project condition. As noted above under Trip Generation and shown in Figure 5.5-4, the proposed project would generate 1,682 new ADT, including 270 AM peak hour trips and 236 PM peak hour trips. Because no new roads or connections are planned for the 2030 scenario, there would be no change in the distribution of project traffic on the local roadway network. Both the without project and with project analyses are presented below.

Street Segment Operations

Table 5.5-12, *Buildout (Year 2030) Street Segment ADT and LOS*, shows the Buildout street segment ADT and LOS, while Figure 5.5-7, *Buildout Without Project Average Daily Traffic*, shows the Buildout Without Project ADT distribution. As can be seen in Table 5.5-12, all street segments would operate at LOS D or better without and with the proposed project, with the exception of La Jolla Shores Drive south of North Torrey Pines Road (LOS E without and with the proposed project) and Genesee Avenue between Science Center Drive and I-5 (LOS F without and with the proposed project). Figure 5.5-8, *Buildout With Project Average Daily Traffic*, shows long-term traffic volumes in the project area.

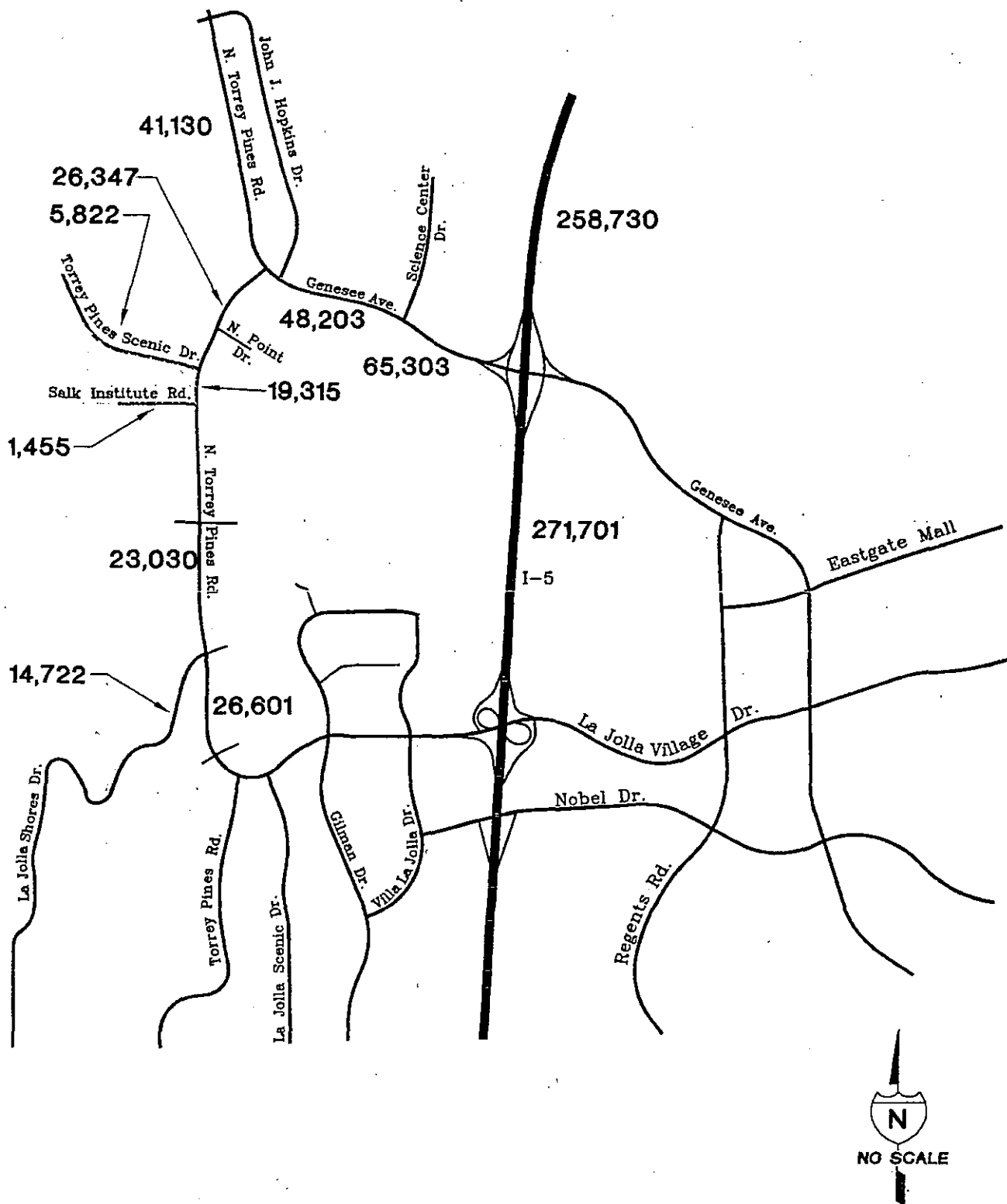
Street Intersection Operations

Table 5.5-13, *Buildout (Year 2030) Street Intersection Operations*, shows the street intersection LOS without and with the proposed project. The table shows that all street intersections studied would operate at LOS D or better under the Buildout Without Project and Buildout With Project conditions. As can be seen from the table, the LOS for the intersection of North Torrey Pines Road and Torrey Pines Scenic Drive would change from LOS A to LOS B during the AM peak hour and from LOS B to LOS C during the PM peak hour with the proposed project in place. Despite such predicted LOS changes, all study intersections would continue to operate at LOS D or better with the proposed project in place (Table 5.5-13).

**Table 5.5-12
BUILDOUT (YEAR 2030)
STREET SEGMENT ADT AND LOS**

Street	Segment	Lanes	Classification	Capacity ^a	Without Project		With Project	
					ADT	LOS	ADT	LOS
North Torrey Pines Rd	North of Genesee Ave	6	Prime	60,000	41,130	C	41,332	C
	Genesee Ave-Torrey Pines Scenic Dr	6	Prime	60,000	26,347	B	27,475	B
	Torrey Pines Scenic Dr-Salk Institute Rd	4	Major	40,000	19,315	B	19,416	B
	Salk Institute Rd-La Jolla Shores Dr	4	Major	40,000	23,030	C	23,467	C
	South of La Jolla Shores Dr	4	Major	40,000	26,601	C	26,836	C
La Jolla Shores Dr	South of North Torrey Pines Rd	2	Collector	15,000	14,722	E	14,756	E
Torrey Pines Scenic Dr	West of North Torrey Pines Rd	2	Collector	10,000	5,822	C	7,168	C

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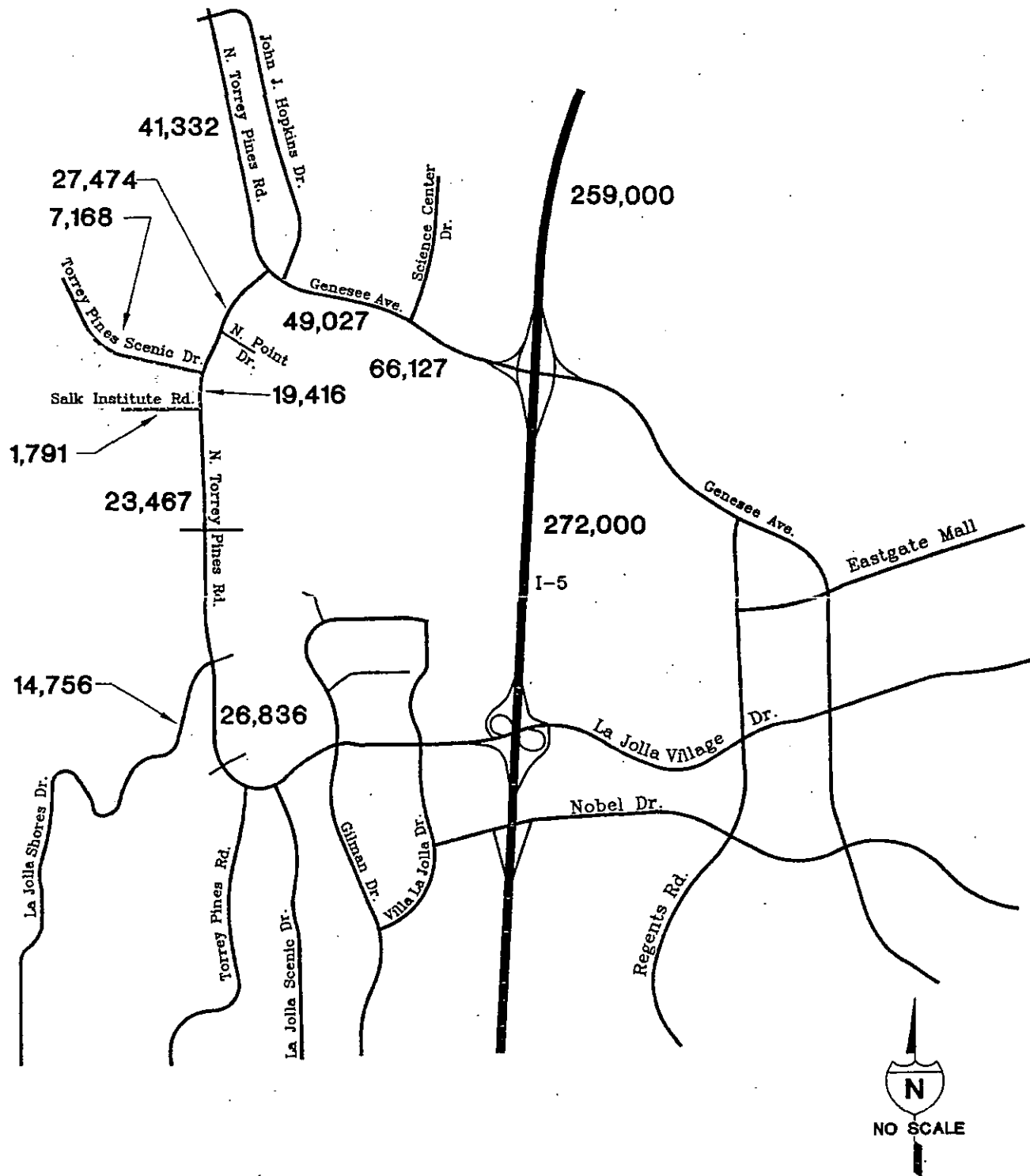
Source: Urban Systems Associates, Inc.

Buildout Without Project Average Daily Traffic

SALK INSTITUTE

Figure 5.5-7

000558



Source: Urban Systems Associates, Inc.

Buildout With Project Average Daily Traffic

SALK INSTITUTE

Figure 5.5-8

Table 5.5-12 (cont.)
BUILDOUT (YEAR 2030)
STREET SEGMENT ADT AND LOS

Street	Segment	Lanes	Classification	Capacity ⁸	Without Project		With Project	
					ADT	LOS	ADT	LOS
Salk Institute Rd	West of North Torrey Pines Rd	2	Sub-collector	2,200	1,455	u.c.	1,791	u.c.
Genesee Ave	North Torrey Pines Rd-Science Center Dr	6	Prime	60,000	48,203	C	49,027	C
	Science Center Dr-I-5	6	Prime	60,000	65,303	F	66,127	F

Source: USAI 2006

⁸ City of San Diego, Traffic Impact Study Manual, Table 2, July 1998, Capacity at LOS E.

Table 5.5-13
BUILDOUT (YEAR 2030)
STREET INTERSECTION OPERATIONS

Intersection	Without Project				With Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
North Torrey Pines Rd / Genesee Ave	14.8	B	24.8	C	16.2	B	27.1	C
North Torrey Pines Rd / Torrey Pines Scenic Dr	9.2	A	14.6	B	10.2	B	22.5	C
North Torrey Pines Rd / Salk Institute Rd	5.2	A	5.9	A	5.3	A	6.6	A
North Torrey Pines Rd / La Jolla Shores Dr	26.8	C	46.7	D	27.6	C	51.7	D
Genesee Ave / Science Center Dr	14.0	B	48.3	D	17.1	B	49.2	D

Source: USAI 2006

Freeway Segment Operations

The Buildout Without Project I-5 freeway segment operations are shown in Table 5.5-14, *Buildout (Year 2030) I-5 Segment ADT and LOS*. All freeway segments would operate at LOS D under the Buildout Without Project condition, with the exception of the northbound segments during the PM peak hour (LOS F) and the southbound segments during the AM peak hour (LOS F). Additionally, the southbound segment south of Genesee Avenue would operate at LOS E during the PM peak hour. There would be no change in LOS along these same freeway segments with the proposed project in place.

Table 5.5-14
BUILDOUT (Year 2030)
I-5 SEGMENT ADT AND LOS

Segment	No. of Lanes	Capacity ¹	Without Project					With Project				
			ADT ²	Peak Hour Volume		LOS		ADT ²	Peak Hour Volume		LOS	
				AM	PM	AM	PM		AM	PM	AM	PM
North of Genesee Avenue NB	5	10,000	258,730	8,589	10,437	D	F	259,000	8,598	10,448	D	F
North of Genesee Avenue SB	5	10,000	258,730	11,385	8,890	F	D	259,000	11,397	8,900	F	D
South of Genesee Avenue NB	5	10,000	271,701	9,019	10,960	D	F	272,000	9,029	10,972	D	F
South of Genesee Avenue SB	5	10,000	271,701	11,956	9,336	F	E	272,000	11,969	9,346	F	E

Source: USAI 2006

¹ Capacity at LOS E for basic freeway segments in 2,350 passenger cars/hour/lane (Source: Appendix C of Caltrans guide for the Preparation of Traffic Impact Studies, December 2002)² Information taken from Caltrans website and included in Appendix D of Traffic Analysis

Freeway Intersection Operations

Table 5.5-15, *Buildout (Year 2030) I-5 Intersection Operations*, shows the buildout freeway intersection LOS without and with project traffic. The table shows that the Genesee Avenue/I-5 intersection would operate at an unacceptable LOS during AM and PM peak periods on both northbound and southbound on- and off-ramps. Specifically, the southbound on-/off-ramp would operate at LOS F during the AM peak period and at LOS E during the PM peak period under the Buildout Without Project condition. In addition, the northbound on-/off-ramp would operate at LOS F during both the AM and PM peak periods under the Buildout Without Project condition. As can be seen through comparison of the without and with project results, the Genesee Avenue/I-5 northbound and southbound interchanges would continue to operate at LOS F during both the AM and PM peak hour period with the same exception: the southbound interchange during the PM peak hour period would continue to operate at LOS E. Although the LOS would not change with the addition of the proposed project traffic, the net changes in delay at each interchange would be greater than the maximum allowable change of 2.0 seconds for an intersection operating at LOS E (southbound in the PM peak hour) and 1.0 second for an intersection operating at LOS F (southbound in the AM peak hour and northbound in both AM and PM peak hours).

Table 5.5-15
BUILDOUT (Year 2030)
I-5 INTERSECTION OPERATIONS

Intersection	Without Project				With Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
I-5 SB on-/off-ramps-Genesee Ave	214.5	F	76.5	E	222.4	F	83.9	E
I-5 NB on-/off-ramps-Genesee Ave	167.4	F	199.5	F	204.7	F	210.6	F

Source: USAI 2006

Freeway Ramp Meter Operations

To determine the effectiveness of ramp meter operations, the Caltrans Guide for the preparation of Traffic Impact Studies (2002) states that Caltrans ramp metering guidelines should be used. The most recent version of these guidelines can be found in the CMP update, January 2003. The measure of effectiveness for ramp meters using Caltrans methodology is expressed as the average delay per vehicle (measured in minutes) and queue length, which is the length of the line of cars backed up behind the ramp meter, (measured in feet). There are currently no ramp meters in the study area (i.e., I-5/Genesee interchange). Under Buildout conditions, however, the interchange of I-5/Genesee Avenue was analyzed as if ramp meters were in place because Caltrans has plans to install ramp meters at every on-ramp location within the city in the future. The method used for analysis is referred to as the 'Fifteen Minute Maximum Delay' method, which involves calculating a meter rate for a ramp based on a fifteen-minute delay with expected volumes.

Table 5.5-16 shows the buildout ramp meter analysis without and with the proposed project. As can be seen in the table, the meter ramp delays at the southbound and northbound on-ramps at I-5/Genesee Avenue would exceed the significance criteria of 15 minutes with the proposed project in place.

Table 5.5-16
BUILDOUT (YEAR 2030)
RAMP METER ANALYSIS

Without Project						
Location	Peak Hour	Demand (Veh/Hr ¹)	Meter Rate ^{1,2}	Excess Demand ¹	Delay (Min ³)	Queue (Feet)
Genesee Ave./I-5 SB on-ramp	AM	1,699	1,359	340	15.0	9,854
	PM	Ramp meter is not turned on during this peak hour				
Genesee Ave./I-5 NB on-ramp	AM	Ramp meter is not turned on during this peak hour				
	PM	1,670	1,336	334	15.0	9,686
With Project						
Location	Peak Hour	Demand (Veh/Hr)	Meter Rate	Excess Demand	Delay (Min)	Queue (Feet)
Genesee Ave./I-5 SB on-ramp	AM	1,704	1,359	345	15.23	10,005
	PM	Ramp meter is not turned on in this peak hour				
Genesee Ave./I-5 NB on-ramp	AM	Ramp meter is not turned on in this peak hour				
	PM	1,715	1,336	379	17.02	10,991

Source: USAI 2006

¹ Veh/Hr = Vehicles per hour

² Meter rate is based on 15-minute (Min) maximum delay; meter rate = Demand/1.25

³ Min = Minutes

Significance of Impact

The majority of street segments would operate under LOS D or better in both Buildout scenarios, with the exception of La Jolla Shores Drive south of North Torrey Pines Road (LOS E) and Genesee Avenue between Science Center Drive and I-5 (LOS F). Although LOS E and LOS F are unacceptable, the project's traffic would not result in direct significant impacts to these street segments because project traffic would not decrease v/c ratios along Genesee Avenue or La Jolla Shores Drive by more than 0.01, and these unacceptable LOS would occur prior to the addition of project traffic. The project's contribution to unacceptable LOS along those two street segments would not be considerable (i.e., exceed City thresholds) and, therefore, cumulative impacts to street segments would be less than significant as a result. In the Buildout With Project condition, implementation of the proposed project would not have a significant direct impact on street intersections and freeway segments since the project would contribute only a minor amount of traffic to the total traffic volume, and an unacceptable LOS would occur with or without the addition of project traffic. The project's contribution to unacceptable LOS would not be considerable and cumulative impacts to freeway segments would be less than significant. In terms of freeway intersections, the project's contribution to delays at the I-5/Genesee Avenue intersection would be considerable and considered significant on a direct and cumulative level.

Mitigation Measures, Monitoring and Reporting Program

Mitigation for project impacts to the intersection of I-5/Genesee Avenue would involve payment of fair-share fees by the project applicant and others that would contribute funding toward planned intersection improvements. The improvements would replace the Genesee Avenue overpass at I-5, install two additional lanes and dual left turn lanes along Genesee Avenue and make freeway ramp meter changes. Since the improvements to the I-5/Genesee intersection are not assured at this time, direct and cumulative impacts would remain significant and unmitigable until such improvements are constructed, despite the implementation of the following mitigation measures.

- 5.5-1 Prior to issuance of a certificate of occupancy on project buildings that would contribute new traffic, the project applicant shall contribute funds at a rate of \$1,000.00 per trip impacting the freeway, up to \$353,000.00 (see Table 9-9 in Appendix D), for regional improvements at the I-5/Genesee Avenue intersection, to the satisfaction of the City Engineer. This contribution shall be paid as certificate of occupancy permit(s) are issued during the phased project buildout.
- 5.5-2 The project applicant shall continue to participate in the current TDM shuttle arrangement. Prior to certificate of occupancy on buildings that would create new traffic, the applicant shall determine whether it will continue to participate in the current arrangement or begin to provide a private shuttle service for its employees between the project site and the regional transit centers. Regardless of which shuttle arrangement is chosen, the applicant shall provide transit pass subsidies for its employees and provide a kiosk or bulletin board on the campus displaying information on transit uses, carpooling, and other forms of ridesharing.

Issue 4: Would the proposal result in effects on existing parking or cause an increased demand for off-site parking?

Parking

The parking requirements for the proposed buildings on the campus are shown in Table 5.5-17, *Salk Institute Parking Requirements*, as is the existing parking supply. As shown in the table, the San Diego Municipal Code (SDMC) requires 2.5 spaces per 1,000 sf of new development; 2.0 spaces per 1,000 sf of existing development have historically been provided at the Institute in accordance with prior development approvals. The total number of required parking spaces for the expanded facilities would be 1,120 spaces (Table 5.5-17).

Table 5.5-17
 SALK INSTITUTE PARKING REQUIREMENTS

Development	Building Area (sf)	Parking Ratio*	Spaces
Existing Buildings	289,800	2.0 spaces/1,000 sf	580
Existing Buildings to be Demolished	-29,000	2.0 spaces/1,000 sf	-58
Net Existing Buildings	260,800	2.0 spaces/1,000 sf	522
Proposed Buildings	239,200	2.5 spaces/1,000 sf	598
NET TOTAL	500,000	--	1,120

*Parking ratio for existing square footage on the Institute campus is calculated pursuant to prior development approvals, which specifically allow the Institute to park the space at 2.0 spaces per 1,000 sf.

Source: City of San Diego 2006

In addition to being limited to a maximum of 500,000 sf of scientific research uses, the proposed project design would provide a total of 1,125 parking spaces (1,055 new underground and 65 surface [22 of which would remain from the existing supply]), 5 spaces greater than the minimum required by the City (see Table 5.5-17). As new buildings are built out on the campus in phases, parking would be provided and maintained based on a ratio of 2.5 spaces per 1,000 sf, as directed by the SDMC. All 1,120 required spaces would be built by the time the proposed project has reached the 500,000 sf maximum. As such, there would be no parking deficiency and no effect on the availability of parking in the vicinity of the proposed project. Furthermore, the proposed project would not impede the accessibility of public facilities (i.e., Torrey Pines Gliderport or Torrey Pines City Park). For these reasons, it can be reasonably concluded that the proposed project would not result in effects to existing parking or cause an increased demand for off-site parking.

Significance of Impact

The proposed project would provide more than the minimum number of parking spaces required under the SDMC. Impacts to parking on site, therefore, would be precluded by the provision of additional spaces, and no off-site parking deficiencies would arise as a result of the proposed project.

Mitigation Measures, Monitoring and Reporting Program

No significant parking impacts are identified; therefore, no mitigation measures are required.

5.6 AIR QUALITY

Scientific Resources Associated (SRA) prepared an Air Quality Technical Report for the proposed project dated September 2006. The study (and other applicable information) is summarized in the following analysis, and the complete report (SRA 2006) has been included as Appendix E of this EIR.

5.6.1 Existing Conditions

Meteorology/Climate

The climate of San Diego County is dominated by a semi-permanent high-pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone (O_3), commonly known as smog.

Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the federal Clean Air Act (federal CAA) of 1970 and its 1977 and 1990 Amendments. The federal CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify pollutant concentrations in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called 'criteria pollutants'). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

In September 1997, the USEPA promulgated federal 8-hour O_3 as well as 24-hour and annual standards for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). However, due to a lawsuit in May 1999, the United States District Court rescinded these standards and the EPA's authority to enforce them. Subsequent to an appeal of this decision by the EPA, the United States Supreme Court

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in February 2001 upheld these standards. As a result, this action has initiated a new planning process to monitor and evaluate emission control measures for these pollutants. The USEPA is moving forward to develop policies to implement these standards.

The federal CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act (Cal CAA) of 1988, and it also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be 'nonattainment areas' for that pollutant. In December 2002, the San Diego County Air Pollution Control District (SDAPCD) submitted a maintenance plan for the one-hour NAAQS for O₃ and requested redesignation from a serious O₃ nonattainment area to an attainment area. As of July 28, 2003, the San Diego Air Basin (SDAB) has been reclassified as an attainment area for the 1-hour NAAQS for O₃. On April 15, 2004, the SDAB was designated a basic nonattainment area for the 8-hour NAAQS for O₃. The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O₃, particulate matter less than 10 microns in diameter (PM₁₀) and PM_{2.5}.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

Table 5.6-1, *Ambient Air Quality Standards*, presents a summary of the ambient air quality standards adopted by the federal and California CAAs.

**Table 5.6-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards		National Standards		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³)	0.12 ppm (235 µg/m ³)	Ethylene Chemiluminescence
	8 hour	--		0.08 ppm (157 µg/m ³)	0.08 ppm (157 µg/m ³)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen Dioxide (NO ₂)	Annual Average	--	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	0.053 ppm (100 µg/m ³)	Gas Phase Chemiluminescence
	1 hour	0.25 ppm (470 µg/m ³)		--	--	
Sulfur Dioxide (SO ₂)	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m ³)	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m ³)	
	1 hour	0.25 ppm (655 µg/m ³)		--	--	
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	150 µg/m ³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		50 µg/m ³	50 µg/m ³	
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³	--	Inertial Separation and Gravimetric Analysis
	24 hours	--		65 µg/m ³	--	
Sulfates	24 hours	25 µg/m ³	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m ³	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m ³	1.5 µg/m ³	
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence	--	--	--

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Table 5.6-1 (cont.)
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards		National Standards		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Vinyl Chloride	24 hours	0.010 ppm (26 $\mu\text{g}/\text{m}^3$)	Gas Chromatography	--	--	--

ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter

Source: California Air Resources Board July 2003

Background Air Quality

The SDAPCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the proposed project site are the Del Mar-Mira Costa College station, which is located approximately eight miles north of the project site (O_3 only); the Kearny Mesa station, which is located approximately six miles to the east-southeast of the project site (PM_{10} and NO_2); and the Downtown San Diego station, which is located approximately 13 miles south of the site (the closest monitoring station that measures CO and SO_2). Because of its coastal location, which is similar to the project site, the Del Mar monitoring station O_3 levels are considered most representative of the O_3 levels at the site. Ambient concentrations of pollutants from these stations over the last three years are presented in Table 5.6-2, *Ambient Background Concentrations*, below.

Air quality has shown improvement in the SDAB such that the 1-hour federal O_3 standard has been exceeded only once at the Del Mar-Mira Costa College monitoring station during the time period from 2002 to 2004. The 8-hour federal O_3 standard was not exceeded at this monitoring station in 2002 and 2003, but was exceeded three times in 2004. The federal 24-hour PM_{10} standard was exceeded once at the Kearny Mesa monitoring station in 2003; however, the exceedance occurred during the Cedar Fire event in San Diego County. The federal annual $\text{PM}_{2.5}$ standard was exceeded during all three years. The Kearny Mesa monitoring station measured PM_{10} and $\text{PM}_{2.5}$ concentrations in excess of the state standards during the period from 2002 to 2004. The data from the monitoring stations indicate that air quality is in attainment of all other federal standards.

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Pollutant	Averaging Time	2002	2003	2004	Most Stringent Ambient Air Quality Standard	Monitoring Station
O ₃	8 hour	0.076	0.081	0.095	0.08	Del Mar
	1 hour	0.095	0.092	0.129	0.09	
PM ₁₀ ²	Annual Arithmetic Mean	24.5 $\mu\text{g}/\text{m}^3$	28.5 $\mu\text{g}/\text{m}^3$	26 $\mu\text{g}/\text{m}^3$	20 $\mu\text{g}/\text{m}^3$	Kearny Mesa
	24 hour	80 $\mu\text{g}/\text{m}^3$	280 $\mu\text{g}/\text{m}^3$	44 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$	
PM _{2.5}	Annual Arithmetic Mean	N/A	11.9 $\mu\text{g}/\text{m}^3$	11.3 $\mu\text{g}/\text{m}^3$	12 $\mu\text{g}/\text{m}^3$	Kearny Mesa
	24 hour	36.5 $\mu\text{g}/\text{m}^3$	170.2 $\mu\text{g}/\text{m}^3$	28.5 $\mu\text{g}/\text{m}^3$	65 $\mu\text{g}/\text{m}^3$	
NO ₂	Annual	0.019	0.018	0.016	0.053	Kearny Mesa
	1 hour	0.080	0.084	0.085	0.25	
CO	8 hour	3.54	4.88	4.04	9.0	San Diego
	1 hour	5.0	5.0	4.9	20	
SO ₂	Annual	0.003	0.004	0.004	0.030	San Diego
	24 hour	0.007	0.008	0.008	0.04	
	3-hour	0.015	0.019	0.018	0.05 ¹	
	1 hour	0.028	0.040	0.042	0.25	

¹Secondary NAAQS

²California averages reported for PM₁₀

Source: www.arb.ca.gov (all pollutants except 1-hour CO and 1-hour and 3-hour SO₂ and annual data for 2004); www.epa.gov/air/data/monvals.html (1-hour CO and 1-hour and 3-hour SO₂ and annual data for 2004)

5.6.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

In accordance with the City of San Diego's (City's) Significance Determination Thresholds (City of San Diego 2004s), the City has set forth air quality significance criteria to assess the potential for a project to cause a significant impact on the ambient air quality. The City has established both general

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thresholds (consistent with CEQA guidance for significant impacts) and specific emission thresholds that are derived from the SDAPCD's regulations. According to the City's guidelines, a project may have a significant air quality environmental impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (Including release emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors (i.e., daycare centers, schools, retirement homes, and hospitals or medical patients in residential homes which could be impacted by air pollutants) to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people; and/or
- Release air contaminants beyond the boundaries of the premises upon which the use emitting the contaminants is located.

Issue 1: Would the proposed project result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?

The City's emission-specific thresholds are derived from criteria in Regulation II, Rule 20.2, Table 20-2-1, "Air Quality Impact Analysis (AQIA) Trigger Levels" provided by SDAPCD. These thresholds are applicable as a screening criterion for potential significance. As of this date, no thresholds have been established for PM_{2.5}, although the EPA recently issued interim guidance on PM_{2.5} which recommends using PM₁₀ as a surrogate for PM_{2.5} (SRA 2005). The emission thresholds are shown in Table 5.6-3, *San Diego Air Pollution Control District Pollutant Thresholds*, below.

<p align="center">Table 5.6-3 SAN DIEGO AIR POLLUTION CONTROL DISTRICT POLLUTANT THRESHOLDS</p>			
Pollutant	Lb/hr	Lb/day	Tons/yr
Carbon Monoxide (CO)	100	550	100
Oxides of Nitrogen (NOx)	25	250	40
Particulate Matter (PM ₁₀)	-	100	15
Oxides of Sulfur (SOx)	25	250	40
Lead and Lead Compounds	-	3.2	0.6
Reactive Organic Compounds (ROC)	-	137	15

Source: City of San Diego Significance Determination Thresholds, 2004.

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Construction

Construction associated with the proposed project may result in short-term air quality impacts due to emissions of fugitive dust and other emissions from heavy construction equipment and construction-related traffic.

Project construction emissions were evaluated using the Urban Emissions (URBEMIS2002) model (Rimpo and Associates 2002). Individual construction projects are known, but their implementation schedule has not been developed at this time. This air quality analysis is, therefore, based on general assumptions regarding construction of the project. First, the model was applied under the assumption that, as a worst-case scenario, all construction would occur within a one-year period. In reality, however, construction would likely be phased over a much longer period of time, depending on funding and advances in technology that would influence the phasing. Therefore, the construction emissions presented below in Table 5.6-4, *Estimated Construction Emissions*, represent the estimated maximum construction emissions associated with the project. Additionally, fugitive dust emissions were calculated assuming watering of active graded surfaces twice daily. It should be noted that emissions of lead by construction equipment would be negligible.

As shown in Table 5.6-4, emissions during project construction would be below the SDAPCD significance criteria. Project construction would, therefore, be in compliance with strategies in the San Diego Regional Air Quality Strategy (RAQS) and the State Implementation Plan (SIP) for attaining and maintaining the air quality standards. Project construction would not conflict with or obstruct the implementation of the RAQS or applicable portions of the SIP. Furthermore, due to the fact that the construction phase of the proposed project is short-term in nature, project construction would not result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, nor would it result in a cumulatively considerable net increase of PM₁₀ or exceed quantitative thresholds for O₃ precursors, NO_x and ROCs.

Table 5.6-4
ESTIMATED CONSTRUCTION EMISSIONS

Total Construction Emissions, lbs/day					
Emission Source	CO	ROC	NOx	SOx	PM ₁₀
<i>Demolition</i>					
Fugitive Dust	-	-	-	-	1.46
Off-Road Diesel	70.43	8.50	55.29	-	2.35
On-Road Diesel	1.01	0.27	5.48	0.08	0.14
Worker Trips	1.49	0.06	0.16	0.00	0.00
TOTAL	72.93	8.83	60.93	0.08	3.95
Significance Criteria	550	137	250	250	100
Significant?	No	No	No	No	No

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Table 5.6-4 (cont.)
ESTIMATED CONSTRUCTION EMISSIONS

<i>Total Construction Emissions, lbs/day</i>					
Emission Source	CO	ROC	NOx	SOx	PM ₁₀
<i>Site Grading</i>					
Fugitive Dust	-	-	-	-	4.71
Off-Road Diesel	61.33	8.61	68.91	-	3.91
Worker Trips	1.90	0.09	0.18	0.00	0.00
TOTAL	63.23	8.70	69.09	0.00	7.90
Significance Criteria	550	137	250	250	100
Significant?	No	No	No	No	No
<i>Building Construction</i>					
Building Construction Off-road Diesel	204.92	28.02	216.59	-	9.78
Building Construction Worker Trips	7.14	0.56	0.34	0.00	0.10
Architectural Coatings Off-Gas	-	88.63	-	-	-
Architectural Coatings Worker Trips	7.14	0.56	0.34	0.00	0.10
Asphalt Off-Road Diesel	33.99	4.00	24.60	-	0.95
Asphalt On-Road Diesel	0.50	0.14	2.70	0.04	0.06
Asphalt Worker Trips	0.33	0.03	0.02	0.00	0.00
TOTAL	254.02	122.50	244.58	0.08	15.51
Significance Criteria	550	137	250	250	100
Significant?	No	No	No	No	No
<i>Total Construction Emissions, tons/year</i>					
Emission Source	CO	ROC	NOx	SOx	PM ₁₀
Demolition	0.48	0.06	0.40	0.00	0.10
Site Grading	0.84	0.12	0.91	0.00	0.36
Building Construction	23.92	4.26	24.43	0.00	8.99
TOTAL	25.24	4.44	25.74	0.00	9.45
Significance Criteria	100	15	40	40	15
Significant?	No	No	No	No	No

Source: SRA 2006

Diesel exhaust particulate matter is known to the state of California to contain carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (California Office of Environmental Health Hazard Assessment [OEHHA] 2003) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted from heavy equipment used in the construction process. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to such emissions could result in adverse health impacts. While construction of the project would result in temporary emissions of diesel exhaust from construction

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equipment, the emissions would not occur 24 hours per day, 7 days per week, but would instead occur during working hours (8 to 10 hours per day, six days per week) and only in the short term. Regardless of its exact duration, therefore, the construction phase of the project would not result in the chronic lifetime exposure of sensitive receptors to diesel exhaust. Because of the short-term nature of the construction project, adverse long-term impacts associated with diesel exhaust particulate matter are not expected as a result of project implementation.

Operations

Operational impacts associated with implementation of the proposed project include impacts associated with emissions from the development itself, including research and laboratory activities, as well as impacts associated with emissions from traffic. The main source of air emissions would be project-related traffic. Air quality impacts associated with traffic were addressed based upon the Transportation Analysis for Salk Institute Master Plan prepared by Urban Systems Associates, Inc. (USAI 2006).

The CEQA Air Quality Handbook (South Coast Air Quality Management District [SCAQMD] 1993) provides screening emission estimates for operational emissions based on energy consumption and land use type. For a research center such as the Salk Institute (Institute), the emission estimates are based on developed square footage.

Emissions from project-related traffic were estimated based on the conservative assumption that emission factors for the year 2007 would represent emissions from traffic, and that the project would generate an additional 1,682 average daily trips (USAI 2006). It was assumed that vehicles would travel, on average, approximately 1.39 miles to the Interstate 5 (I-5)-Genesee Avenue interchange for a total daily vehicle miles traveled (based on segment volumes and lengths) of 1,996 miles.

This scenario represents the Near Term conditions as defined in the Transportation Analysis (Near Term is defined as 2005-2006). For the Buildout scenario, because emission factors would decrease from 2005-2006 due to phase-out of older model vehicles and stricter emission standards, emissions would be lower. Emissions for the Buildout scenario were estimated based on emission factors obtained from the Emissions Factor (EMFAC2002) model, which is the latest version of the ARB's model for on-road traffic. Emissions were based on the standard mix of traffic for San Diego County as provided in the EMFAC2002 model.

Table 5.6-5 below presents a summary of the estimated operational emissions associated with the project.

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Table 5.6-5
ESTIMATED OPERATIONAL EMISSIONS

Emission Source	CO	ROC	NO _x	SO _x	PM ₁₀
lbs/day					
Energy Use, Research Park	1.01	0.05	5.82	-	0.20
Traffic	122.02	12.77	6.96	0.03	0.22
TOTAL	123.03	12.82	12.78	0.03	0.42
Significance Criteria	550	55	250	250	100
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Tons/year					
Energy Use, Research Park	0.18	0.0092	1.06	-	0.037
Traffic	22.27	2.33	1.27	0.00	0.04
TOTAL	22.45	2.34	2.33	0.00	0.08
Significance Criteria	100	15	40	40	15
<i>Significant?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SRA 2006

As shown in Table 5.6-5, project-related emissions of criteria pollutants were predicted to be below the significance thresholds for both short-term (daily) and long-term (annual) averaging periods.

Significance of Impact

For the reasons noted in the above discussion, it can be concluded that the proposed project would not result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts are identified; therefore, no mitigation measures are required.

Issue 2: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?

Carbon Monoxide "Hot Spots" Evaluation

The Transportation Analysis (USAI 2006) for the proposed project evaluated whether or not there would be a decrease in the level of service at the intersections affected by the project. The potential for a carbon monoxide (CO) 'hot spot,' which is defined as an area with a high concentration of carbon monoxide, should be evaluated in accordance with the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998). According to the Protocol, CO 'hot spots' are typically

evaluated when (a) the level of service (LOS) of an intersection or roadway decreases to LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment. In certain cases, intersections with a LOS D should be evaluated; those cases include areas where meteorological conditions are favorable to the formation of higher CO concentrations. The project region does not, however, experience meteorological conditions that would favor the formation of high CO concentrations (i.e., stable atmospheric conditions and low wind speeds) during the AM and PM peak hours; therefore, only intersections for which project-related traffic resulted in LOS E or worse were considered in the CO "hot spots" evaluation.

The transportation analysis evaluated whether a decrease in the LOS at intersections and roadway segments in the project vicinity would occur during peak AM and PM periods. The seven intersections evaluated in the analysis, along with the LOS for Existing Conditions and the Near Term Scenario (without and with the project), are presented below in Table 5.6-6, *Intersection Level of Service Summary (Existing and Near Term Scenario)*. The seven intersections and LOS for the Buildout Scenario are presented in Table 5.6-7, *Intersection Level of Service Summary (Buildout Scenario)*, below. Additional information on intersection LOS is contained in Section 5.5, Traffic/Circulation.

**Table 5.6-6
INTERSECTION LOS SUMMARY (EXISTING AND NEAR TERM SCENARIO)**

Intersection	Existing Conditions		Near Term Without Project		Near Term With Project	
	AM	PM	AM	PM	AM	PM
North Torrey Pines Rd./Genesee Ave.	B	B	B	B	B	B
North Torrey Pines Rd./Torrey Pines Scenic Dr.	A	B	A	B	A	B
North Torrey Pines Rd./Salk Institute Rd.	A	A	A	A	A	A
North Torrey Pines Rd./La Jolla Shores Dr.	C	C	C	C	C	D
Genesee Ave./Science Center Dr.	A	C	A	C	A	C
Interstate 5 SB On-Off Ramps/Genesee Ave.	D	C	D	C	D	C
Interstate 5 NB On-Off Ramps/Genesee Ave.	D	C	E	C	E	C

Source: USAI 2006

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Table 5.6-7 INTERSECTION LOS SUMMARY (BUILDOUT SCENARIO)				
Intersection	Without Project		With Project	
	AM	PM	AM	PM
North Torrey Pines Rd./Genesee Ave.	B	C	B	C
North Torrey Pines Rd./Torrey Pines Scenic Dr.	A	B	B	C
North Torrey Pines Rd./Salk Institute Rd.	A	A	A	A
North Torrey Pines Rd./La Jolla Shores Dr.	C	D	C	D
Genesee Ave./Science Center Dr.	B	D	B	D
Interstate 5 SB On-Off Ramps/Genesee Ave.	F	E	F	E
Interstate 5 NB On-Off Ramps/Genesee Ave.	F	F	F	F

Source: USAI 2006

As shown in Tables 5.6-6 and 5.6-7, project-related traffic would not degrade the LOS to E or worse; therefore, no CO 'hot spots' are anticipated. While the intersection of northbound I-5 ramps and Genesee Avenue would operate at LOS E during the AM peak hour under the Near Term Scenario without the project, the LOS would be unchanged with addition of project-related traffic. The LOS at the I-5/Genesee Avenue interchange is projected to be worse during buildout conditions in both the south- and northbound directions (see Table 5.6-7). As noted in the table, LOS E or worse would occur regardless of whether the proposed project is implemented. As such, project-related traffic would not cause a significant impact to ambient air quality. It can be concluded that the proposed project would not expose sensitive receptors to substantial pollutant concentrations relating to CO 'hot spots.'

Laboratory operations at the Institute are exempt from the permitting requirements of the SDAPCD under SDAPCD Rule 11 because related emissions are minor. Emissions of criteria pollutants from new laboratory operations would continue to be minor and would not affect the ambient air quality by contributing substantially to an existing or project violation of any air quality standard.

Toxic Air Contaminants (TACs)

The Institute maintains a Hazardous Materials Business Plan (Business Plan) that is filed with the San Diego County Department of Environmental Health, Hazardous Materials Division (HMD). The Business Plan provides the HMD with an inventory of potentially hazardous materials handled on site. The types and amounts of materials currently handled on site are generally small and it is anticipated that the types and amounts of hazardous materials that would be handled in the expanded facility would be similar to those currently handled on site. Table 5.6-8, *Types and Quantity of Hazardous Materials Stored at The Salk Institute*, presents a summary of the hazardous materials used at the Institute.

As shown in Table 5.6-8, the amounts and types of materials classified as hazardous are stored in negligible amounts on site. Most of the materials are present in amounts less than 1 pound (for solids) or 1 gallon (for liquids) and the amount of storage would not substantially increase with the proposed project in place. The substances that are stored in greater quantities include inert gases (e.g., argon, nitrogen), which are non-reactive, and alcohols (e.g., methyl alcohol, ethyl alcohol, and isopropyl alcohol), which are also used as common household solvents. The materials are handled within a controlled environment in laboratories that are equipped with laboratory hoods. No new laboratory hoods are proposed as part of the proposed project nor is the amount of chemical used in the existing hoods expected to substantially increase. The Institute would continue to comply with all applicable regulations pertaining to the handling of hazardous materials, including those that may be vented via fume hoods. In the unlikely event of an accidental spill, all proper precautions would be taken by the Institute to minimize the amounts that would be released and it is unlikely that the proposed project would expose sensitive receptors, such as the proposed daycare facility, future residents and existing off-site residents, to substantial levels of hazardous emissions because of the extremely small quantities used at and potentially emitted from the facility. Thus, potential impacts associated with hazardous emissions would be less than significant.

**Table 5.6-8
TYPES AND QUANTITY OF HAZARDOUS MATERIALS
STORED AT THE SALK INSTITUTE**

Material	Type	Amount
Argon	Inert Gas	336 cubic feet; 1 cubic foot cylinders
Acetonitrile	Liquid	5 gallons
Carbogen	Gas Mixture	210 cubic feet; cylinders
Ethyl Alcohol	Liquid	55 gallons
Isopropyl Alcohol	Liquid	8 gallons
Methyl Alcohol	Liquid	50 gallons
Nitrogen	Inert Gas	304 cubic feet; cylinders
Hydrogen Fluoride	Liquid	25 pound cylinders
Benzene	Liquid	0.50 gallons
Benzidine Hydrochloride	Liquid	0.00022 pounds
Carbon Tetrachloride	Liquid	0.50 gallons
Chloroform	Liquid	1.0 gallon
Diethylstilbestrol	Solid	0.00022 pounds
Formaldehyde	Liquid	1.0 gallon
Mitomycin C	Solid	0.000011 pounds
Paraformaldehyde	Solid	1.0 pound
Nitrosomethylurea	Solid	0.00055 pounds
Thiourea	Solid	0.00011 pounds
Urethane	Solid	0.00011 pounds
Arsenic Acid	Solid	0.000022 pounds
Dimethyl Hydrazine	Liquid	0.00125 gallons
Hexamethylphosphoramide	Liquid	0.0125 gallons
Lead Acetate	Solid	0.000022 pounds
Methylnitro nitrosoguanidine	Solid	0.000022 pounds

Source: SRA 2006

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Significance of Impact

The proposed project would not expose sensitive receptors to substantial pollutant concentrations relating to CO 'hot spots.' There would, therefore, not be a significant impact from pollutant concentrations. An accidental spill of hazardous contaminants would not expose sensitive receptors to substantial hazardous emissions because of the small quantities used; therefore, the impacts associated with hazardous emissions would not be significant.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts are identified. Therefore, no mitigation measures are required.

Issue 3: Would the proposed project emit 100 pounds per day or more of particulate matter (dust)?

Table 5.6-3 under Issue 1, above, shows pollutant thresholds for various types of pollutants as they apply to the proposed project. In particular, Table 5.6-3 illustrates that the significance threshold for particulate matter (PM₁₀; i.e., dust) on a daily basis is 100 pounds. As discussed under Issue 1, the analysis conducted by SRA (2006) concluded that the proposed project would not violate the significance threshold of 100 pounds per day (lbs/day) for particulate matter based upon estimated construction emissions (see Table 5.6-4) and operational emissions (see Table 5.6-5). For this reason, it can be concluded that the proposed project would not emit 100 lbs/day or more of particulate matter.

Significance of Impact

The estimated daily construction emissions (15.51 lbs/day) and operational emissions (27.93 lbs/day) would be below the significance threshold of 100 lbs/day for PM₁₀ emissions. Therefore, impacts would be less than significant.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts are identified; therefore, no mitigation measures are required.

5.7 NOISE

URS prepared a Noise Technical Report for the Salk Institute (Institute) project dated May 5, 2006. The acoustical analysis evaluated the regulatory requirements and potential noise impacts associated with the construction and operation of the proposed project. The report is attached as Appendix F to this EIR. The results and conclusions of the analysis are summarized herein.

5.7.1 Existing Conditions

Definitions

Noise

Noise is generally defined as loud, unpleasant, unexpected and/or undesired sound that disrupts/interferes with normal activity and is typically associated with human activity. Individual responses to noise are diverse and influenced by noise type, perception of the importance of the noise, appropriateness of the noise setting, time of day, type of activity disrupted by the noise and individual sensitivity.

Sound

Sound is a physical phenomenon consisting of minute vibrations traveling through a medium (e.g., air) that are sensed by the human ear and characterized by several variables, including frequency and intensity. Frequency, measured in hertz (Hz), refers to a sound's pitch, and intensity, measured in decibels (dB), describes a sound's loudness. The minimum change in the level of a sound that an average human ear can detect is approximately 3 dB.

A-Weighting

A-weighting is a method commonly used to quantify environmental sounds that involves the evaluation of a sound's frequencies according to a weighting system. This weighting system is reflective of the fact that human hearing is less sensitive to low and very high frequencies than at mid-range frequencies. The decibel level measured through A-weighting is referred to as the A-weighted sound level, or dBA.

L_{eq} , L_{max} and L_{min}

Because environmental noise levels vary continuously, an 'equivalent sound level' descriptor, L_{eq} , is used. The term ' L_{eq} ' refers to the energy-mean A-weighted sound level during a measured time interval; it is equivalent to the constant sound level that would need to be produced by a given source

to equal the fluctuating level measured. Further, the acoustic range of a given noise source is represented through the use of the ' L_{max} ' and ' L_{min} ' indicators, which are the root-mean-square maximum and minimum obtainable noise levels, respectively, during a monitoring interval.

Community Noise Equivalent Level

Another sound measure, the Community Noise Equivalent Level (CNEL), is an adjusted average A-weighted sound level for a 24-hour day. It is calculated through addition of a 5-dB 'penalty' to sound levels during evening hours (7 p.m. to 10 p.m.) and a 10-dB 'penalty' during nighttime hours (10 p.m. to 7 a.m.) in order to compensate for increased sensitivity to noise during quieter times. Both the State of California and the City of San Diego (City) use CNEL to evaluate land use compatibility with regard to noise.

Noise Sources and Corresponding Sound Level Thresholds

Transportation

Transportation noise sources near the project site include vehicular traffic (automobiles, trucks, buses, etc.) on North Torrey Pines Road. According to the City's Noise Element, sound levels up to 65 dBA CNEL from transportation noise sources are normally accepted as compatible with residential, transient housing, educational, playground and park uses (City of San Diego 2005f). Sound levels up to 70 dBA CNEL are normally accepted as compatible with office buildings, business and professional uses (City of San Diego 2005f).

Stationary Noise

A stationary noise source is a source of sound that does not normally move from one place to another. Typically, a stationary noise source may be associated with a particular land use and/or project. The Institute is a non-conforming scientific research facility in a residential zone that is classified as a commercial use with regards the City's Noise Ordinance. Existing stationary noise sources on the project site include the central plant mechanical tower.

For all of the land uses in the area surrounding the project site that are discussed below under Noise-Sensitive Receptors, stationary noise sources on site would not be permitted to contribute to noise in excess of the below-stated requirements. Table 5.7-1, *Applicable Stationary Source Sound Level Limits*, summarizes the maximum sound levels for land uses in the area surrounding the proposed project site, and a discussion of the table follows.

**Table 5.7-1
APPLICABLE STATIONARY SOURCE SOUND LEVEL LIMITS¹**

Land Use Type	Land Use Description	Time of Day		
		Daytime ²	Evening ³	Nighttime ⁴
Commercial	Academic reserve, hotel, campus parking area	65	60	60
Single-Family Residential	Blackhorse Farms	50	45	40
Multi-Family Residential	Student housing	60	55	50

Source: City of San Diego 2000

¹ Sound Level Limits measured as A-weighted decibels (dBA)

² Daytime represents the time period between 7 a.m. and 7 p.m.

³ Evening represents the time period between 7 p.m. and 10 p.m.

⁴ Nighttime represents the time period between 10 p.m. and 7 a.m.

As shown in Table 5.7-1, the academic reserve to the north, conference center/hotel to the south and campus parking area to the east are also considered commercial land uses. Sound level limits for stationary sources near these commercial areas are 65 dBA between 7 a.m. and 7 p.m. (daytime hours) and 60 dBA between 7 p.m. and 10 p.m. (evening hours) and 10 p.m. and 7 a.m. (nighttime hours). Sound level limits for stationary sources near the single-family residential area south of the project site are 50 dBA during daytime hours, 45 dBA during evening hours, and 40 dBA during nighttime hours. Sound level limits for stationary sources near multi-family residential area (student housing) east of the site are 60 dBA during daytime hours, 55 dBA during evening hours and 50 dBA during nighttime hours.

Table 5.7-2, *Stationary Source Sound Level Limits Between Zoning Districts*, summarizes the maximum sound level allowed from stationary sources at the proposed project site along property lines where zoning districts differ. Specifically, sound level limits between zoning districts would be as follows:

- 65 dBA during daytime hours and 60 dBA during evening and nighttime hours at the north property line, the south property line near the hotel, and the east property line near the campus parking;
- 57.5 dBA during daytime hours, 52.5 dBA during evening hours, and 50 dBA during nighttime hours at the south property line near the single-family residences;
- 62.5 dBA during daytime hours, 57.5 dBA during evening hours, and 55 dBA during nighttime hours at the east property line near the student housing.

Table 5.7-2
 STATIONARY SOURCE SOUND LEVEL LIMITS
 BETWEEN ZONING DISTRICTS¹

Property Line	Time of Day		
	Daytime ²	Evening ³	Nighttime ⁴
North, South (near hotel) and East (near campus parking area)	65	60	60
South (near single-family residences)	57.5	52.5	50
East (near student housing)	62.5	57.5	55

Source: URS 2006

¹ Sound Level Limits measured as A-weighted decibels (dBA)

² Daytime represents the time period between 7a.m. and 7p.m.

³ Evening represents the time period between 7p.m. and 10p.m.

⁴ Nighttime represents the time period between 10p.m. and 7a.m.

Construction Noise

Construction noise sources are those associated with construction activities such as site preparation and grading, demolition and erection of structures. Section 59.5.04040 of the City Municipal Code (SDMC) regulates construction noise as follows:

- It shall be unlawful for any person, between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on legal holidays as specified in section 21.04 of the SDMC, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive, or offensive noise.
- It shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 a.m. to 7:00 p.m.

Noise-Sensitive Receptors

Noise-sensitive receptors (receptors) are indoor and/or outdoor land uses that may be subject to stress and/or significant interference from noise. Existing on-site receptors include outdoor seating areas, plazas and courts. Existing off-site receptors include residential dwellings, transient lodging and dormitories. Proposed on-site noise-sensitive receptors would include temporary housing quarters, a daycare facility with associated playground, a paved plaza and outdoor seating areas.

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Noise Measurements

Noise measurements were conducted using the One Larson Davis Model 820 American National Standards Institute (ANSI) Type 1 Integrating Sound Level Meter data-collection device. The results of the measurements are summarized in Table 5.7-3, *Sound Level Measurements*. The table shows that one-hour sound levels for existing receptors onsite were approximately 60 dBA L_{eq} , 72 dBA L_{eq} and 54 dBA L_{eq} at each of the three measurement locations.

Table 5.7-3 SOUND LEVEL MEASUREMENTS ¹							
Measurement Location	Description	L_{eq}	L_{min}	L_{max}	L10	L50	L90
ML1	35 ft south of Torrey Pines Scenic Drive	60.1	41.9	79.0	63.5	52.4	46.0
ML2	35 ft west of North Torrey Pines Road	72.0	51.3	95.6	75.8	67.7	58.9
ML3	50 ft north of Salk Institute Road	54.0	41.9	82.5	57.2	49.2	45.0

Source: URS 2006

¹ All measurements were taken from the centerline of each street, and all measurements are shown as A-weighted decibels (dBA).

5.7.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

The City of San Diego's Significance Determination Thresholds (2004d) state that acoustical impacts relating to the proposed project would be significant under CEQA if the project would:

- Result in or create a significant increase in the existing ambient noise environment;
- Expose people to noise levels which exceed the City's adopted noise ordinance or are incompatible with the City's noise land use compatibility chart; and/or

- Result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP).

Issue 1: Would the proposal result or create a significant increase in the existing ambient noise environment?

Issue 2: Would the proposal expose people to noise levels which exceed the City's adopted noise ordinance or are incompatible with the City's noise land use compatibility chart?

Transportation Noise

The California Department of Transportation (Caltrans) Sound32 Traffic Noise Prediction Model was used to determine traffic sound levels. The results of this analysis of off-site receptors are summarized in Table 5.7-4, *Calculated Traffic Sound Levels at 50 feet from Roadway Segments*. The table shows that the change in sound levels at off-site receptors along all roadways that would result from the proposed project would be less than 3 dBA CNEL. As previously stated, changes in sound level below 3 dBA CNEL would be undetectable by the average person. For this reason, a significant increase in the existing ambient noise environment on site due to transportation-related noise impacts is not anticipated.

Exterior sound levels were estimated for potential traffic noise impacts to on-site sensitive receptors. Using a worst-case scenario, the analysis assumed that the average daily traffic (ADT) volume on the private driveway west of Salk Institute Road was equal to the project-generated ADT on Salk Institute Road (336 vehicles). The results of the analysis as well as the comparative land use compatibility levels are shown in Table 5.7-5, *Future Exterior Traffic Noise Levels*.

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Table 5.7-4
CALCULATED TRAFFIC SOUND LEVELS AT 50 FEET FROM ROADWAY SEGMENTS¹

Roadway Segment	Existing		Near Term Without Project		Near Term With Project		Delta ³	Buildout Without Project		Buildout With Project		Delta ⁴
	ADT ²	CNEL	ADT	CNEL	ADT	CNEL		ADT	CNEL	ADT	CNEL	
Genesee Avenue												
North Torrey Pines Rd. to Science Center Dr.	39,578	75.1	41,509	75.3	42,333	75.4	0.1	48,203	75.9	49,027	76.0	0.1
Science Center Dr. to Interstate 5	43,848	75.5	45,779	75.7	46,600	75.8	0.1	65,303	77.3	66,127	77.3	0.0
North Torrey Pines Road												
North of Genesee Ave.	29,834	73.9	30,095	73.9	30,297	73.9	0.0	41,130	75.2	41,332	75.3	0.1
Genesee Ave. to Torrey Pines Scenic Dr.	18,228	71.7	18,576	71.8	19,203	71.0	0.1	26,347	73.3	27,475	73.5	0.2
Torrey Pines Scenic Dr. to Salk Institute Rd.	17,058	71.4	17,406	71.5	17,507	71.5	0.0	19,315	72.0	19,416	72.0	0.0
Salk Institute Rd. to La Jolla Shores Dr.	21,595	72.4	21,943	72.5	23,380	72.8	0.3	23,030	72.7	23,467	72.8	0.1
South of La Jolla Shores Dr.	19,900	72.1	20,248	72.1	20,483	72.2	0.1	26,601	73.3	26,836	73.4	0.1
Torrey Pines Scenic Dr.	4,764	62.5	4,764	62.5	6,110	63.5	1.0	5,822	63.4	7,168	64.2	0.8
Salk Institute Rd.	1,201	53.4	1,201	53.4	1,537	55.5	2.1	1,455	53.9	1,791	55.8	1.9
Private driveway ⁵	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	336	51.3	N/A
La Jolla Shores Dr.	11,813	66.4	12,335	66.5	12,366	66.6	0.1	14,722	67.4	14,756	67.4	0.0

Source: URS 2006

¹ Calculated traffic sound level measurements = dBA CNEL

² ADT = average daily traffic

³ Delta refers to the difference between Near Term Without Project and Near Term With Project.

⁴ Delta refers to the difference between Buildout Without Project and Buildout With Project.

⁵ Private driveway extending from Salk Institute Road

Table 5.7-5
FUTURE EXTERIOR TRAFFIC NOISE LEVELS¹

Receptor Location	Calculated Levels	Land Use Compatibility Level
Residential Quarters	55	65
Daycare Facility	56	65
Playground	55	65
Torrey East Building:		
South wing, south façade	66	70
South wing, east façade	70	70
Paved plaza between wings	63	65
North wing, north façade	66	70
North wing, east façade	70	70
Salk Community Center Building:		
North façades	63	70
Outdoor Seating Areas	57-60	65

Source: URS 2006

¹Traffic noise level measurements are in dBA CNEL

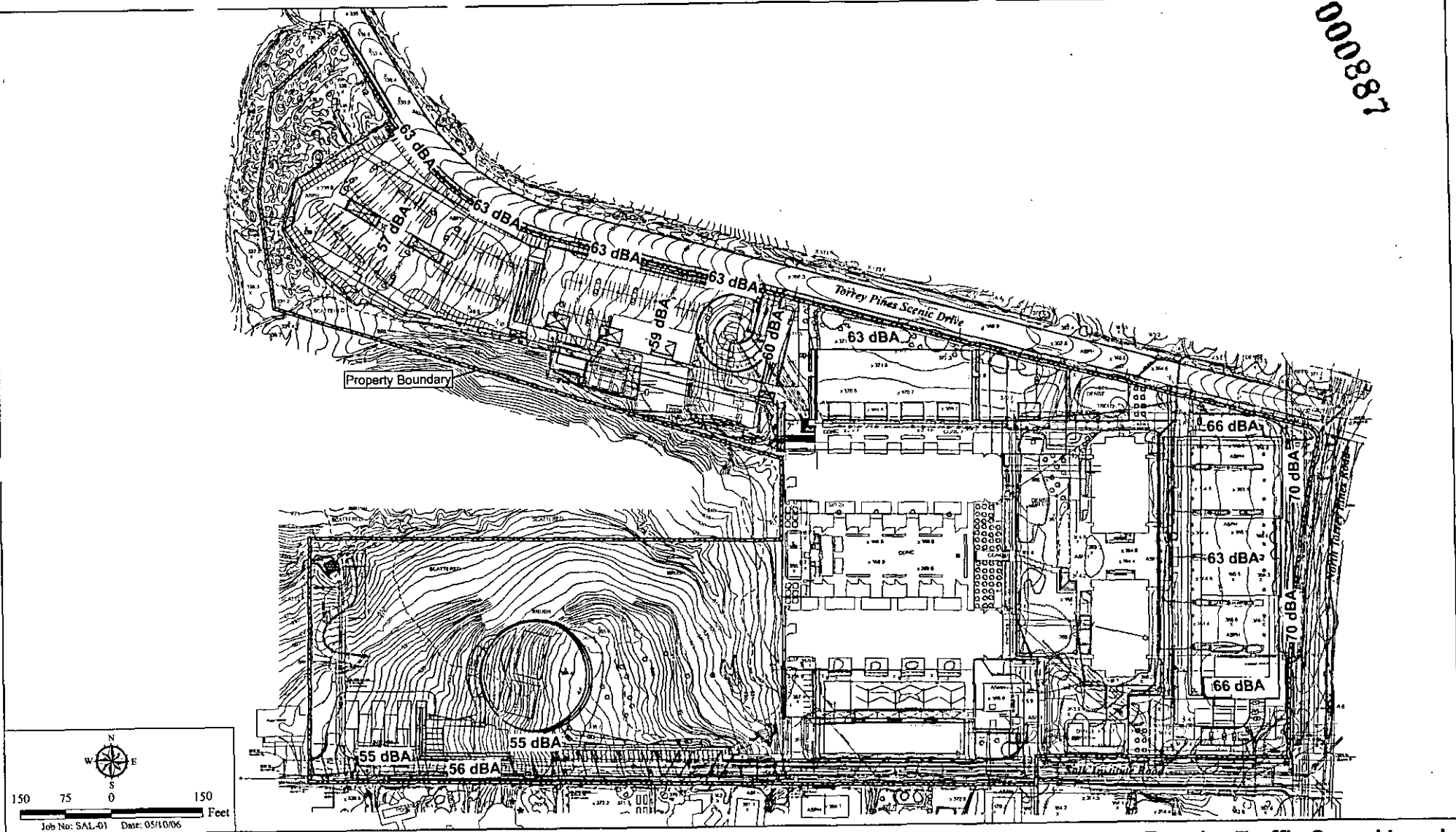
The analysis concluded that estimated sound levels for proposed on-site receptors would be approximately 55 to 56 dBA CNEL at the daycare center, playground and temporary residential quarters, approximately 63 to 70 dBA CNEL at the Torrey East Building and approximately 57 to 63 dBA CNEL at the Salk Community Center Building. None of the estimated sound levels would exceed the land use noise compatibility levels allowed for each land use. Refer to Figure 5.7-1, *Future Exterior Traffic Sound Levels*, for details on the location of measurements for the proposed receptors noted above.

Stationary Noise

Proposed stationary noise sources include the daycare facility with an outdoor playground that would care for approximately 75 children. To determine stationary hourly sound levels from the proposed daycare facility, the Cadna A Noise Prediction Model was used. As was done for transportation noise, stationary noise was estimated under a worst-case scenario assumption which integrated all current structures and omitted all future structures (except those associated with noise sources) and topography gradations. Table 5.7-6, *Projected Stationary Noise Source Levels*, provides a summary of the anticipated daytime sound levels for stationary noise sources, as estimated from all property lines.

Sound levels for the private sewer pump station proposed for the northwest end of the campus adjacent to the proposed Salk Community Center Building were not quantified in this analysis. However, the pump station would be fully enclosed and located below grade, and not near any noise sensitive land uses; thus, it would not have appreciable noise effects.

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Future Exterior Traffic Sound Levels

SALK INSTITUTE

Figure 5.7-1

Table 5.7-6 PROJECTED STATIONARY NOISE SOURCE LEVELS ¹	
Property Line	Calculated Level
North	<30
South:	
Near residences	41
Near hotel	<30
East:	
Near campus parking	<30
Near student housing	<30
West	<30

Source: URS 2006

¹Calculated noise level measurements are in dBA L_{eq}

As can be seen in a comparison between the projected noise source levels in Table 5.7-6 and the property line limits established in Table 5.7-2, the projected noise levels would be well below the levels allowed at each property line. The project would add less than 1 dBA to the existing noise level at the residential area south of the project site.

Construction Noise

Acoustical calculations were performed to estimate noise from construction activities, assuming a worst-case scenario under which construction activities would be performed near the closest residential area, which is offsite along the south side of the property, approximately 35 feet south of the proposed daycare facility and temporary housing units. The calculations also assumed the construction noise would have point source acoustical characteristics, which means that the noise would diminish at a rate of 6 dB per doubling of distance from the source. The analysis concluded that construction equipment sound levels, under worst-case assumptions, would range between 68 dBA and 98 dBA. Because of the intermittent nature of construction work, however, the average sound level for a 12-hour workday would likely be substantially less than predicted. In addition, no loud single-event noises are anticipated during project construction. Even so, the analysis concluded that the permitted sound level limit (75 dBA L_{eq}) could be exceeded when averaged over 12 hours.

In addition, project phasing could result in construction noise levels that would expose the proposed daycare facility and/or temporary housing quarters to short-term noise levels that would exceed the City standards. The daycare facility and housing construction would occur at different times and directly adjacent to one another and could expose the playground and/or the future housing residents to unacceptable noise levels.

Significance of Impact

Based upon the above discussion, no significant impacts related to the change in ambient noise level are anticipated as a result of development of the proposed project, because changes to the ambient noise level resulting from traffic and stationary noise sources would be less than 3 dBA (see Table 5.7-3 for change in noise level resulting from traffic sources).

No significant impacts related to incompatibility with the City's noise ordinance or noise land use compatibility chart are expected. Specifically, exterior noise-sensitive areas within the project site would not be exposed to traffic sound levels of more than 65 dBA CNEL, and those exterior areas of the proposed project classified as commercial for purposes of noise assessment (e.g., scientific research building facades) would not exceed sound levels of 70 dBA CNEL. In addition, the project would comply with the City's sound level limits for stationary noise at all property lines.

Periodic construction noise has the potential to exceed the City's noise threshold of 75 dBA L_{eq} averaged over 12 hours. Significant, temporary noise impacts would potentially occur off-site along the south property line from construction of the daycare facility, housing, greenhouses and Torrey East Building and on site from construction of the daycare facility and housing quarters. No significant impacts are expected during construction of the northerly project components (i.e., north lawn core facility or Salk Community Center Building) due to distance from the southerly receptors, intervening buildings and lack of noise-sensitive receptors to the north.

Mitigation Measures, Monitoring and Reporting Program

The following construction noise control measures shall be incorporated into the contractor specifications and used to minimize unnecessary construction noise and reduce impacts to below significant levels:

- 5.7-1 Prior to the commencement of construction, the construction contractor shall contact a qualified acoustician to prepare a construction noise control plan(s). The plan(s) shall evaluate noise levels based on actual sound levels and acoustic heights of equipment proposed for use. The plan(s) shall identify appropriate methods for achieving the 75 dB L_{eq} threshold averaged over 12 hours. Methods could include the use of noise barriers and/or operational adjustments; ~~to the extent feasible~~.
- 5.7-2 Only equipment capable of performing necessary tasks with the lowest possible sound level and acoustic height shall be used.

- 5.7-3 All construction equipment shall be operated and maintained so as to minimize noise generation. Equipment and vehicles shall be kept in good repair and fitted with manufacturer- recommended mufflers.
- 5.7-4 If deemed necessary by an acoustical consultant, shielding in the form of temporary barriers shall be provided for standard activity, and portable noise screens or enclosures shall be utilized for high-noise activities/with equipment. The noise barriers used must block line-of-sight between source and receiver, be constructed of solid material and be long enough to prevent sound from flanking around the end of the barrier.

Issue 3: Would the proposal result in land uses that are not compatible with aircraft noise levels as defined by an adopted airport Airport Land Use Compatibility Plan (ALUCP)?

Although the March 2005 San Diego County Regional Airport Authority (SDCRAA) draft Airport Land Use Compatibility Plan (ALUCP) for MCAS Miramar has not been adopted, it was prepared in accordance and is required to be consistent with the Air Installation Compatible Use Zone (AICUZ) study adopted by the U.S. Marine Corps in 2005 and is the policy document used by the City to address the issue of a proposed project's compatibility with aircraft noise levels. MCAS Miramar is the only airport with which the proposed project would have the potential for conflict in terms of noise compatibility. The MCAS Miramar Compatibility Map indicates that the project site is located within Compatibility Zone 'E', which is within the secondary Airport Influence Area (AIA). Compatibility Zone E has a low risk level for safety and airspace protections as well as a low potential for noise impacts. The San Diego County ALUCP defines this zone as being beyond the 55 CNEL noise contour and having only occasional overflights that are intrusive to some outdoor activities (SDCRAA 2005). Noise contours produced from data collected by the U.S. Navy in 1989 and included in the AICUZ study show the 60 dB CNEL noise contour located approximately two miles north and east of the project site, extending just west of Interstate 805 (Department of the Navy 1996).

Significance of Impact

Based upon the above discussion, no significant impacts related to land use incompatibility with aircraft noise levels as defined by the draft ALUCP are anticipated as a result of development of the proposed project. The project area is located within MCAS Compatibility Zone E, an airport compatibility zone having a low noise impact potential. Furthermore, exterior noise-sensitive areas within the project site would not be exposed to aircraft noise levels greater than 60 dBA CNEL, as noise contours produced for the airfield show that the project site is beyond the 55 CNEL noise contour and would only occasionally be subjected to overflights that are intrusive to some outdoor activities. The proposed project and its associated land uses are, therefore, compatible with the aircraft noise levels defined in the current ALUCP, and would not be significantly impacted by aircraft noise.

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Mitigation Measures, Monitoring and Reporting Program

No significant aircraft noise impacts were identified; therefore, no mitigation is required.

5.8 HYDROLOGY/WATER QUALITY

A Preliminary Drainage Study and Water Quality Technical Report (WQTR) have been prepared for the proposed project by Latitude 33 Planning and Engineering (Latitude 33 2006a, b). These studies and other applicable information are summarized in the following analysis, with the complete Drainage Study and WQTR included as Appendices G and H of this EIR, respectively.

5.8.1 Existing Conditions

Watershed and Drainage Characteristics

The project site is within the Peñasquitos Hydrologic Unit (HU), 1 of 11 major drainage areas identified in the 1994 (as amended) San Diego Regional Water Quality Control Board (RWQCB) *Water Quality Control Plan for the San Diego Basin* (Basin Plan). The Peñasquitos HU is a triangular-shaped area of approximately 170 square miles, and extends from Poway on the east to Mission Bay-Del Mar along the coast. The HU is divided into a number of hydrologic areas (HAs) based on local drainage characteristics, with the project site located in the Scripps HA (Figure 5.8-1, *Project Location Within Local Hydrologic Designations*). Surface drainage in the Peñasquitos HU occurs through a number of small to moderate size streams, including several small, unnamed canyon drainages in the Scripps HA. Average annual precipitation in the Peñasquitos HU ranges from approximately 10 to 18 inches (RWQCB 1994), with the project site vicinity (La Jolla) receiving an average of approximately 12 inches per year. January through March are the wettest months in the site vicinity, with average rainfall totals of 2.52, 2.31 and 2.45 inches, respectively. June through August are the driest months, exhibiting average precipitation levels of 0.09, 0.05 and 0.07 inches, respectively (Weather.com 2005).

Much of the central, eastern and northwestern (North Peninsula) portions of the project site have been previously developed, with existing facilities including structures, paved access roads and parking lots, greenhouses, drainage facilities and turfed areas. The southwestern portion of the property and the northwestern site perimeter encompass generally native vegetation, with the central and eastern portions of the site including several relatively large landscaped areas associated with existing development.

Existing drainage within and from the site is variable in direction, with the project site located near the downstream end of a larger watershed area. Current 100-year storm flow from the site and upstream areas within the noted watershed is approximately 360.8 cubic feet per second (cfs), with approximately 21 percent of this flow (74.3 cfs) generated within the project site (Appendix G). The described 100-year flow of 360.8 cfs is discharged from a number of points in and around the project site. Specifically, these include an existing 48-inch diameter storm drain pipeline that outlets in the southwestern corner of the site (123.2 cfs), a 60-inch diameter storm drain pipeline that outlets to a

000893 concrete-lined channel north of Torrey Pines Scenic Drive (192.6 cfs), and several other minor discharge points along the northern and western site boundaries (with a combined discharge total of 45 cfs, refer to Figure 5.8-2, *Project Site and Vicinity Drainage Characteristics*). The existing 48-inch diameter storm drain outlet in the southwestern site corner is equipped with a concrete energy dissipator, with runoff from additional areas in the western portion of the site occurring as smaller point discharge and/or sheet flow.

Runoff from the western, central and southern portions of the site flows generally to the west and enters (either directly or indirectly) an adjacent series of unnamed canyons west of the site, with these flows continuing west and/or south and discharging to the coast approximately 1,200 feet southwest of the project site (Figure 5.8-2). Runoff from developed areas in the eastern portion of the site is collected through a number of existing on-site storm drain facilities and, along with off-site flows from upstream areas, is conveyed through existing storm drain pipelines located within Salk Institute Road, North Torrey Pines Road and Torrey Pines Scenic Drive. The combined on- and off-site 100-year flow of 192.6 cfs from these areas enters the concrete-lined channel on the north side of Torrey Pines Scenic Drive and continues north to the Torrey Pines Golf Course. Flow within the golf course ultimately enters an unnamed, northwest-trending canyon drainage and discharges to the coast approximately 0.5 mile north-northwest of the site (Figure 5.8-2).

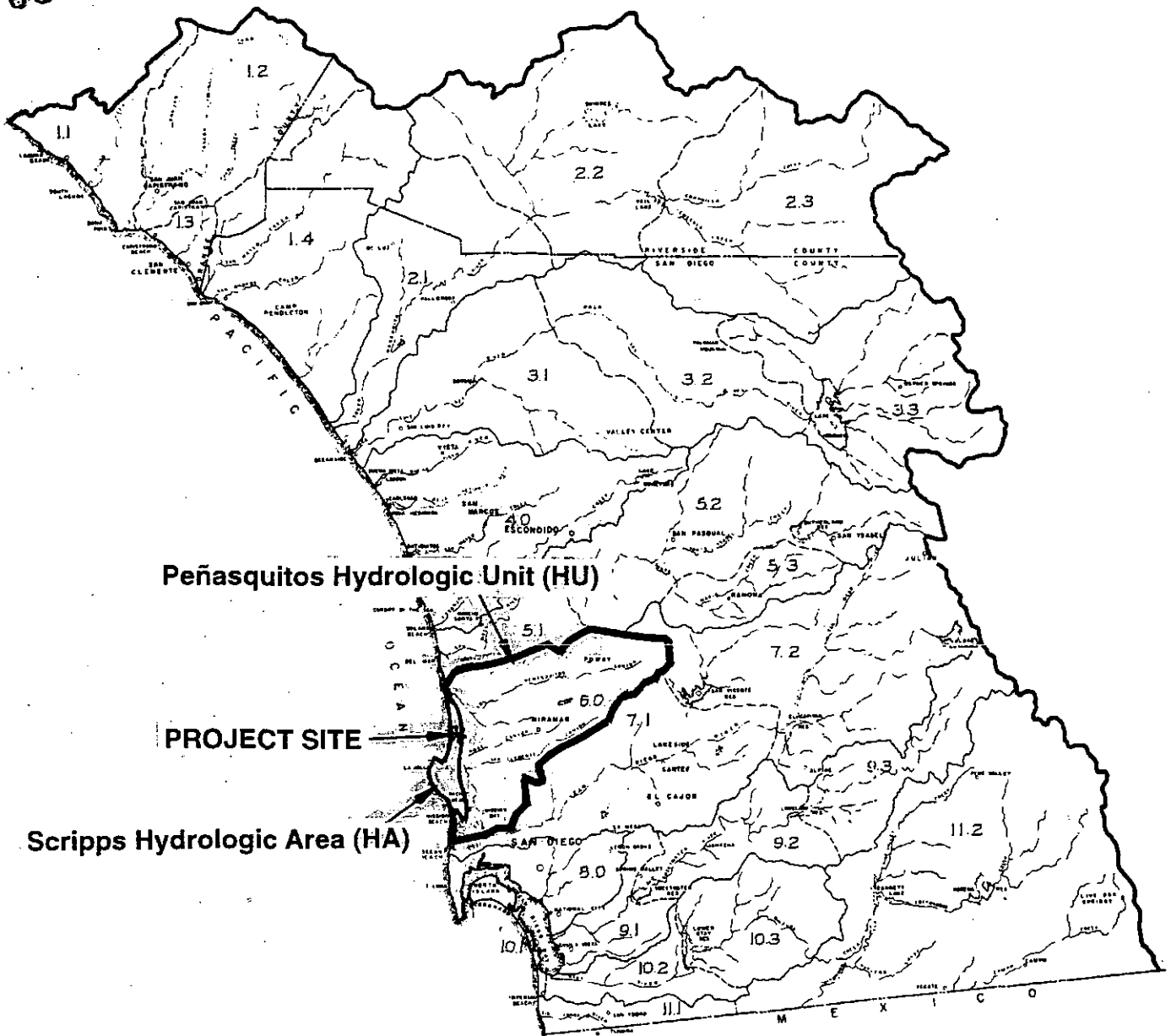
Flood Hazards

The project site and vicinity have been mapped for flood hazards by the Federal Emergency Management Agency (FEMA). The entire project site and adjacent areas are mapped as Zone X, or areas outside the 500-year (and thus the 100-year) floodplain (FEMA 1997a, b). The closest mapped flood hazard areas include a coastal flooding zone located approximately 500 hundred feet west of the northwestern site corner, and a 100-year floodplain approximately 1.4 miles to the northeast along Soledad Canyon Creek (FEMA 1997b). The coastal flood zone is limited predominantly to areas adjacent to (and west of) the mapped shoreline, and occurs at elevations approximately 300 feet lower than the project site due to the intervening coastal cliffs (FEMA 1997a).

Groundwater

No known data are available regarding the occurrence and depth of groundwater within the project site. Major groundwater basins are not mapped within the site or immediate vicinity, with the closest such basin located approximately five miles north of the site along the San Dieguito River (State Water Resources Control Board [SWRCB] 2003a; San Diego County Water Authority [SDCWA] 1997). A Geological Reconnaissance Report conducted for the proposed project noted that unrelated exploratory borings excavated in the site vicinity encountered perched groundwater at a depth of 26 feet below the ground surface (Southern California Soil & Testing, Inc. [SCS&T] 2004). Perched groundwater may also occur on-site, and typically consists of one or more unconfined aquifers

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MILES

Source: RWQCB (1994)

Project Location Within Local Hydrologic Designations

SALK INSTITUTE

Figure 5.8-1

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Project Site and Vicinity Drainage Characteristics

SALK INSTITUTE

Figure 5.8-2

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supported by impermeable or semi-permeable strata. Such aquifers are typically limited in volume and extent, but can vary with seasonal precipitation and/or irrigation levels. The referenced Geological Reconnaissance Report notes that "shallow ponding of subsurface water may develop upon the well-cemented Lindavista Formation..." (SCS&T 2004), with this unit underlying much of the site. Based on the above information, permanent shallow groundwater is not anticipated to occur on-site, although perched groundwater may potentially be present.

Water Quality

Surface water within the project site consists predominantly of intermittent flows from storm events and runoff from landscape irrigation. No known water quality data are available for the site or immediate vicinity, with storm flows subject to variations in water quality due to local conditions such as runoff volume/velocity and land use. A summary of typical contaminant sources and loadings for various land use types is provided in Tables 5.8-1, *Summary of Typical Contaminant Sources for Urban Storm Water Runoff*, and 5.8-2, *Typical Contaminant Loadings in Runoff for Various Land Uses*. Based on the urban nature and density of existing development within the project site and upstream watershed areas, local surface water quality is expected to be generally moderate to poor. No known data are available regarding groundwater quality within the project site and vicinity, with local groundwater quality expected to be generally moderate to poor for similar reasons as noted for surface water.

Table 5.8-1
SUMMARY OF TYPICAL CONTAMINANT SOURCES
FOR URBAN STORM WATER RUNOFF

Contaminant	Typical Contaminant Sources
Sediment and Floatables	Streets, driveways, landscaping, construction, atmospheric deposition, erosion
Pesticides and Herbicides	Landscaping, roadsides, utility right-of-ways, soil wash-off
Organic Materials	Landscaping, trash collection/disposal areas, animal wastes
Oxygen-demanding Substances	Landscaping, animal wastes, trash collection/disposal areas, leaky sanitary sewer lines or septic systems
Metals	Automobiles, bridges, atmospheric deposition, industrial areas, soil erosion, corroding metal surfaces, combustion processes
Oil and Grease/Hydrocarbons	Roads, driveways, parking lots, vehicle maintenance areas, gas stations, illicit dumping to storm drains
Bacteria and Viruses	Landscaping, roads, leaky sanitary sewer lines or septic systems, sanitary sewer cross-connections, animal wastes
Nitrogen and Phosphorus	Landscaping fertilizers, atmospheric deposition, automobile exhaust, soil erosion, animal wastes, detergents

Source: USEPA (1999)

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Table 5.8-2
TYPICAL CONTAMINANT LOADINGS IN RUNOFF
FOR VARIOUS LAND USES (lbs/acre/yr)

Land Use	TSS	TP	TKN	NH ₃ - N	NO ₂ + NO ₃ - N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

HDR = High Density Residential; MDR = Medium Density Residential; LDR = Low Density Residential. N/A = Not available; insufficient data to characterize. TSS = Total suspended solids; TP = Total Phosphorus; TKN = Total Kjeldahl Nitrogen; NH₃ - N = Ammonia - Nitrogen; NO₂ + NO₃ - N = Nitrite + Nitrate minus Nitrogen; BOD = Biochemical Oxygen Demand; COD = Chemical Oxygen Demand; Pb = Lead; Zn = Zinc; Cu = Copper
Source: USEPA (1999)

The SWRCB and RWQCB produce bi-annual qualitative assessments of statewide and regional water quality conditions. Since 1998, these assessments have focused on federal Clean Water Act (CWA) Section 303(d) impaired water listings and priority status for assignment of total maximum daily load (TMDL) requirements. The Section 303(d) and TMDL assessments involve prioritizing waters on the basis of water quality (i.e., impaired) status and the necessity for assigning quantitative contaminant load restrictions (i.e., TMDL), with these data submitted to the United States Environmental Protection Agency (USEPA) for review and approval. Impaired waters identified for the Scripps HA in the most current (~~2002~~2006) approved assessment include 3.9 miles of shoreline listed due to bacterial indicators, with a medium priority assigned for establishment of TMDL (SWRCB ~~2003b~~2006). It should be noted that the only specific areas of impairment listed in the referenced 303(d) list ~~encompass portions of several local beaches including La Jolla Shores, South Casa, Whispering Sands, Windansca, Tourmaline Surf Park and Pacific Beach, all of~~ is Children's Pool Beach in La Jolla, which is located approximately 3.0 miles ~~1.5 miles or more~~ south of the project site.

Impaired water quality along the coastal portions of the Scripps HA is also documented in urban runoff monitoring efforts being conducted in association with requirements under the National Pollutant Discharge Elimination System (NPDES) and the associated Municipal Storm Water Permit (refer to the discussion of Regulatory Framework below for additional information). While these monitoring efforts do not include sampling locations within the project site or associated watersheds, the most recent (2004) annual report notes that urban runoff, sewage spills and bacterial

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contamination have been reported as impairing water quality in the watershed management area that includes the Scripps HA (MEC Analytical Systems [MEC] 2005).

Regulatory Framework

The proposed project is subject to a number of regulatory requirements associated with federal, state and local guidelines as summarized below, with additional discussion provided in Section 5.8.2, *Impacts*, as appropriate.

National Pollutant Discharge Elimination System Requirements

The proposed project is subject to applicable elements of the CWA, including the NPDES. Specific NPDES requirements include conformance with the following: (1) the General Construction Activity Storm Water Permit (NPDES No. CAS000002); (2) the General Groundwater Extraction Waste Discharge Permit (i.e., NPDES No. CAG919002, Discharge To Surface Water in the San Diego Region Except For San Diego Bay); (3) the NPDES Municipal Storm Water Permit (NPDES No. CAS0108758) and related City of San Diego (City) standards (as outlined below); and (4) the NPDES General Industrial Activity Storm Water Permit (NPDES No. CAS000001, SWRCB Order 02-01-DWQ).

General Construction Activity Permit

Conformance with the General Construction Activity Permit is required prior to project development for applicable sites exceeding one acre, with this permit issued by the SWRCB (pursuant to Order No. 99-08-DWQ) under an agreement with the USEPA. Specific conformance requirements include implementing a Storm Water Pollution Prevention Plan (SWPPP) and an associated monitoring program, as well as a Storm Water Sampling and Analysis Strategy (SWSAS) for applicable projects (i.e., those discharging directly into waters impaired due to sedimentation, or involving potential discharge of non-visible contaminants that may exceed water quality objectives). These plans identify detailed measures to prevent and control the off-site discharge of contaminants in storm water runoff. Specific pollution control measures typically involve the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these requirements implemented through BMPs. While site-specific BMPs can vary with conditions such as proposed grading parameters, slope and soil characteristics, detailed guidance for construction-related BMPs is provided in the permit text and City of San Diego Municipal Code *Land Development Manual-Storm Water Standards* (Storm Water Standards, City of San Diego 2002a), as well as additional sources including the *Storm Water Best Management Practices Handbooks* (California Stormwater Quality Association 2003), and the California Department of Transportation (Caltrans) *Storm Water Quality Handbooks* (Caltrans 2003). The application of storm water permit and SWPPP

000899 Requirements to the proposed project is described below in applicable portions of Section 5.8.2, *Impacts*.

General Groundwater Extraction Waste Discharge Permit

Conformance with the noted General Groundwater Extraction Waste Discharge Permit is required by the RWQCB (pursuant to Order No. 2001-96 for the project area) prior to disposal of extracted groundwater. This requirement is applicable to discharge activities which either: (1) involve more than 100,000 gallons per day (gpd) of discharge; or (2) include contaminants that would exceed applicable discharge requirements, including the Basin Plan water quality and beneficial use objectives described below. Compliance with these standards typically involves using BMPs for a number of physical and/or chemical parameters, such as (depending on site-specific conditions) erosion/sedimentation controls and testing/treatment of extracted groundwater prior to disposal.

Municipal Storm Water Permit

This permit was initially adopted by the RWQCB on February 21, 2001 (under RWQCB Order No. 2001-01), with a revised permit adopted January 24, 2007 (under RWQCB Order No. 2007-0001). The Municipal Permit identifies waste discharge requirements for urban runoff related to applicable new development, redevelopment and existing development sites under the jurisdiction of copermitees (including the City of San Diego). The intent of these requirements is to protect environmentally sensitive areas and provide conformance with applicable water quality standards, including the CWA and the RWQCB Basin Plan (as outlined below). Specific requirements include: (1) using volume- or flow-based structural (treatment control) BMPs to mitigate (i.e., infiltrate, filter or treat) runoff from a design storm event or intensity; and (2) reducing the volume of post-development runoff containing pollutant loads that cause or contribute to an exceedance of receiving water quality objectives to the maximum extent practicable (MEP).

The Municipal Permit requires copermitees to fund and implement Urban Runoff Management Programs (URMPs) that will reduce runoff and contaminant discharges to the MEP. The URMPs were conducted on a County-wide basis for the first two years, and (as required) transitioned to a watershed-based approach for subsequent efforts. The watershed-based approach for URMPs has been implemented by the City for the project area, with the Peñasquitos Watershed URMP (WURMP, City of San Diego 2003) completed in January 2003 and the Fiscal Year 2004 (July 1, 2003 to June 30, 2004) Peñasquitos Watershed Annual Report released in January 2005.

Pursuant to the described Municipal Permit requirements, the City (along with other applicable copermitees) developed the *Standard Urban Stormwater Mitigation Plan* (SUSMP, City of San Diego 2002b) to address storm water quality issues, and adopted the related Storm Water Standards (City of San Diego 2002a). These documents provide (among other things) direction for applicants to

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determine if and how they are subject to City storm water and related Municipal Storm Water Permit standards, and identify requirements for the inclusion of permanent site design, source control and treatment control BMPs to provide regulatory conformance for applicable projects. It should be noted that the current City Storm Water Standards were most recently updated in 2003 and do not specifically address current requirements under the 2007 Municipal Permit. It is anticipated that updated City Storm Water Standards will be updated. If, after the updated Standards are adopted, it is determined that additional or modified measures are required to provide conformance with the NPDES Permit and City Storm Water Standards, the design of the proposed project storm water system would be modified accordingly.

General Industrial Activity Storm Water Permit

The NPDES General Industrial Activity permit is administered by the SWRCB as noted above for the Construction Permit, and is intended to regulate storm water “[a]ssociated with industrial activity . . . that discharges either directly or indirectly to waters of the United States.” The basic requirements for conformance with the Industrial Permit include: (1) submission of a properly completed Notice of Intent (NOI) to the SWRCB prior to operation; (2) identification and elimination of unauthorized non-storm water discharges; (3) development and implementation of a SWPPP, including measures to reduce or prevent industrial pollutants in storm water discharges pursuant to applicable BAT (toxic and non-conventional pollutants) and BCT (conventional pollutants) levels of treatment, as well as appropriate water quality standards; and (4) monitoring/reporting of storm water discharges to determine the effectiveness of the project SWPPP (including sampling and analysis for appropriate projects). These requirements apply to applicable industrial activities, unless the project qualifies for (and receives approval of) a Conditional Exclusion (e.g., if industrial materials and activities would not be exposed to precipitation and/or runoff).

Hazardous Material Codes

Project construction may be subject to a number of federal and state requirements related to the potential on-site occurrence of hazardous materials to be removed/disposed during site construction/demolition, including lead-based paint and asbestos insulation. Specifically, these regulations include the following: (1) Section 1532.1 of the California Code of Regulations (CCR) governs construction work where an employee may be occupationally exposed to lead, specifically including “demolition or salvage of structures where lead or materials containing lead are present...”; (2) California Health and Safety Code Section 25157.8(a), which states that “no person shall dispose of waste that contains total lead in excess of 350 parts per million... at other than a Class I hazardous waste disposal facility.”; and (3) the federal Resource Conservation and Recovery Act (RCRA; 40 CFR 261), which requires the proper disposal of waste streams containing hazardous materials.

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Basin Plan Requirements

The RWQCB San Diego Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as "the uses of water necessary for the survival or well being of man, plus plants and wildlife." Identified beneficial uses for unnamed surface waters within the Scripps HA are summarized below, with no beneficial uses identified for groundwater in the Scripps HA.

- Contact Water Recreation (REC-1): Includes water used for recreational activities involving body contact with water where ingestion of water is reasonably possible. Specific uses may include swimming, waterskiing, skin diving, scuba diving, surfing and fishing.
- Non-contact Water Recreation (REC-2): Includes water used for recreational activities with proximity to water but typically no body contact, where ingestion of water is reasonably possible. Specific uses may include picnicking, sunbathing, hiking, beachcombing, camping, boating and hunting.
- Warm Freshwater Habitat (WARM): Includes uses of water that support warm water ecosystems, including the preservation or enhancement of aquatic habitats, fish and wildlife.
- Wildlife Habitat (WILD): Includes uses of water that support terrestrial ecosystems, including the preservation or enhancement of terrestrial habitats, wildlife and related food/water sources.

Identified beneficial uses for coastal waters downstream of the project site include REC-1, REC-2 and WILD as described above, as well as the following categories.

- Industrial Service Supply (IND): Includes uses of water for industrial activities that do not depend primarily on water quality, such as mining, cooling water supply, hydraulic conveyance, gravel washing and fire protection.
- Navigation (NAV): Includes waters used for shipping, travel or other water-borne transportation.
- Commercial and Sport Fishing (COMM): Includes waters used for commercial or recreational collection of fish, shellfish or other organisms used for purposes such as human consumption or bait.

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- Preservation of Biological Habitats of Special Significance (BIOL): Includes designated areas or habitats such as established refuges, parks, sanctuaries, or ecological preserves where special protection is required.
 - Rare, Threatened, or Endangered Species (RARE): Includes habitats necessary, at least in part, for the survival and successful maintenance of plant and animal species established under state or federal law as rare, threatened, or endangered.
 - Marine Habitat (MAR): Includes the preservation or enhancement of marine habitats, vegetation (e.g., kelp), fish, shellfish, or wildlife (e.g. marine mammals and shorebirds).
 - Aquaculture (AQUA): Includes waters used for activities such as the propagation or harvesting of organisms used for human consumption or bait.
 - Migration of Aquatic Organisms (MIGR): Includes waters used for purposes such as migration, acclimatization or other temporary activities by aquatic organisms.
 - Spawning, Reproduction and/or Early Development (SPWN): Includes waters that support high quality habitats used for fish reproduction and/or early development.
 - Shellfish Harvesting (SHELL): Includes waters suitable for the collection of filter-feeding shellfish used for human consumption, commercial or sport purposes.

Water quality objectives identified in the Basin Plan are based on established beneficial uses, and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." Water quality objectives include both narrative requirements and specific numeric objectives for identified waters. Water quality objectives for surface waters in the Scripps HA include both narrative and numeric standards as summarized in Table 5.8-3. As noted in the table, minimal quantitative standards for surface water quality exist in the project area. Water quality objectives for groundwater in the Scripps HA are limited to narrative standards. The narrative objectives for surface and groundwater resources include quantitative and/or qualitative standards requirements for identified contaminants, as well as general antidegradation requirements.

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Table 5.8-3 SURFACE WATER QUALITY OBJECTIVES FOR THE SCRIPPS HYDROLOGIC AREA OF THE PEÑASQUITOS HYDROLOGIC UNIT ¹												
Constituent (mg/l or as noted)												
TDS	Cl	SO ₄	% Na	N&P	Fe	Mn	MBAS	B	Odor	Turb NTU	Color Units	F
-- ²	-- ²	-- ²	-- ²	-- ³	-- ²	-- ²	-- ²	-- ²	None	20	20	-- ²

¹ Concentrations not to be exceeded more than 10% of the time during any one-year period.

² Numeric objectives not established.

³ Shall be maintained at levels below those which stimulate algae and emergent plant growth.

Abbreviation Key: TDS = total dissolved solids; Cl = Chlorides; SO₄ = Sulfate; Na = Sodium; N&P = Nitrogen and Phosphorus; Fe = Iron; Mn = Manganese; MBAS = Methylene Blue – Activated Substances (anionic surfactant or commercial detergent); B = Boron; Turb = Turbidity (measured in Nephelometric Turbidity Units [NTU]); F = Fluoride.

Source: RWQCB (1994)

City of San Diego Requirements

Construction of any project in the City is subject to applicable erosion control requirements in the City Grading Ordinance, as well as the City Storm Water Standards and SUSMP guidelines noted above under NPDES requirements. Pursuant to the City Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code 43.03 et seq.), all new development in the City of San Diego is required to comply with the storm water pollution prevention measures identified in Chapter 14, Article 2, Division 1 (grading), and Chapter 14, Article 2, Division 2 (storm water runoff control and drainage) of the Land Development Code. These measures require that development prevent erosion, sedimentation and pollutant discharge to the MEP. Both temporary (construction) and permanent erosion, sedimentation and water pollution control measures are required to be implemented to the satisfaction of the Mayor/Environmental Designee, including efforts such as erosion prevention; sediment control; phased grading; site design, source control and treatment control BMPs; and monitoring, maintenance and (as necessary) modification of implemented measures.

The proposed project is subject to applicable provisions of several City planning documents, including the Progress Guide and General Plan (General Plan; 1989a), *University Community Plan* (Community Plan; 1990) and North City Local Coastal Program - Land Use Plan (1981). All of these documents include general goals, objectives and/or policies related to hydrology and water quality, as summarized below.

Progress Guide and General Plan

Identified goals and objectives related to hydrology and water quality in the General Plan include: (1) implementing watershed management practices to control runoff quantity and quality; (2)

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University Community Plan

The Community Plan includes the following general goals and objectives related to hydrology/water quality: (1) preservation of hydrologic resources including floodplains, streams, creeks, canyons and washes; (2) avoidance of increases in development-related runoff through minimizing construction of impervious surfaces and preparation/implementation of storm water management plans; and (3) reduction of water pollution through efforts such as erosion/sediment control.

North City Local Coastal Program/Land Use Plan

Identified goals and objectives related to hydrology/water quality in the North City Local Coastal Program/Land Use Plan include the following items: (1) develop performance standards for grading and construction in areas of steep slopes to address erosion and sedimentation; (2) preserve and enhance natural areas and habitats, including canyons; (3) maintain and enhance marine water quality; (4) avoid large increases in storm flows associated with development projects; (4) minimize grading during the rainy season and implement adequate erosion/sediment controls for grading conducted during the rainy season; and (5) preclude development along bluffs and cliffs, within canyon drainages, and on slopes of 25 percent or greater (i.e., steep hillsides).

5.8.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

Based on the current City of San Diego Significance Determination Thresholds (2004d) and the nature and location of the proposed project, project-related impacts are considered significant if one or more of the following applicable conditions apply:

- The project would result in modifications to existing drainage patterns that would substantially affect downstream properties and/or environmental resources such as biological communities or archaeological resources;

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- The project would result in substantial changes to on- or off-site stream flow velocities or quantities;
- The project would grade, clear, or grub more than one acre of land, especially into slopes over 25 percent grade (i.e., steep hillsides), and would drain into a sensitive water body or stream and uncontrolled runoff results in erosion and subsequent sedimentation of downstream water bodies;
- The project would impose flood hazards on other properties or proposes to develop wholly or partially within a 100-year floodplain or other identified flood hazard zone; or
- The project would violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.

Issue 1: Would the proposal result in an increase in impervious surfaces and associated increased runoff?

Implementation of the proposed project would result in the construction of new impervious surfaces including structures and pavement, with a detailed description of proposed development provided in Section 3.0, *Project Description*, and the proposed site plan shown on Figure 3-1. Pursuant to this information and related discussion in the project Drainage Study (Appendix G), the proposed project would result in a net decrease of impervious cover within the project site. This conclusion is based on the following considerations:

- Most of the proposed new structures would be located in areas with existing impervious surfaces. Specifically, the Salk Community Center Building, adjacent underground parking structure and Torrey East Building would be located in areas currently encompassing paved surface parking lots in the north mesa and eastern end of the site. Development of the proposed building sites would include landscaping such as garden courts and perimeter plantings, while the underground parking structure would encompass a turfed area at the surface. The inclusion of these turfed and landscaped areas would result in a net decrease of impervious cover compared to the existing paved parking lots (Appendix G).
- The proposed north lawn core facility would be located below grade in an existing turfed area (i.e., the north lawn). Once constructed, the rooftop of this underground facility would be replanted with turf (similar to the existing research facility located below the south lawn), with no associated net increase of impervious surface area.

- Construction of the proposed greenhouses, daycare facility, temporary housing units and related parking facilities in the southern edge and south mesa areas would result in only a minor increase in impervious cover, with this increase more than offset on a project-wide basis by the reductions in impervious surface area described above.

Pursuant to the above discussion and related hydrologic calculations provided in the project Drainage Study (Appendix G), implementation of the proposed project would result in a net decrease of impervious surface area and a slight net increase in runoff generation within the site. Specifically, existing 100-year runoff generated within the site totals 74.3 cfs and post-development runoff would total 75.2 cfs, for a net increase of 0.9 cfs (refer to Table 1 of both the existing and proposed hydrology/hydraulic calculations provided in Appendix G). The noted increase in runoff would occur despite the overall reduction in on-site impervious area, due to changes in the time of concentration for site runoff (i.e., the time required for flows to travel from the most remote point in a subbasin to the point of interest).

As described under Existing Conditions, current 100-year storm flows from the project site and associated upstream (off-site) areas are discharged from a number of points in and around the project site (refer to Figure 5.8-2). Overall site runoff levels would increase by 0.9 cfs as noted above, with runoff levels at three of the individual discharge points also increasing as a result of the proposed project (refer to Figure 5.8-2 and the Existing and Developed Hydrology Maps in Appendix G). None of these increases would result in associated significant impacts, however, based on the following discussions of individual discharge points. Only the three discharge points that would exhibit an increase in 100-year flows as a result of the proposed project are described below, with impacts related to discharges exhibiting no net increase or a net reduction in flows from project implementation assumed to be less than significant.

- Discharge from the existing drainage outlet in the southwestern portion of the site would increase from the current level of 123.2 cfs to 129.6 cfs after proposed development. This additional runoff would not result in significant impacts related to increased runoff volumes or velocities, based on the relatively minor increase in 100-year flow (approximately 5 percent), as well as the fact that the existing energy dissipator at the outlet structure is adequate to accommodate the additional flow with no increase in downstream erosion potential (Latitude 33 2005).
- Discharge flowing south from the central portion of the north mesa would increase from the current level of 1.8 cfs to 5.7 cfs after proposed development (refer to Figure 5.8-2). This additional runoff would not result in significant impacts related to increased runoff volumes or velocities, due to the minor amount of overall flow, the fact that all runoff in this location would drain through a vegetated swale and/or generally level terrain encompassing landscaping and native vegetation prior to entering steeper terrain in the adjacent canyon, and

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the proposed use of energy dissipators (e.g., riprap aprons) at all outlets. Because of these conditions, the increased flow would move through swales designed to reduce velocities and allow infiltration, and/or be spread out in vegetated areas with shallow slopes before flowing over dissipator structures designed to disseminate flows and reduce velocity. The described drainage system would reduce the potential for concentrated flows and/or increased runoff velocities that could result in downstream erosion potential (Latitude 33 2006c, 2005).

- Flows draining southwest from the southwestern corner of the north mesa into the adjacent canyon would increase from the current level of 0.8 cfs, to 0.9 cfs after proposed development (refer to Figure 5.8-2). This additional runoff would not result in significant impacts related to increased runoff volumes or velocities due to the minor amount of increased and overall flow, as well as the fact that this location would drain through areas encompassing vegetated swales, landscaping, native vegetation and/or energy dissipators prior to entering steeper terrain in the adjacent canyon. (Latitude 33 2006c, 2005).

Significance of Impact

Based on the above described pre-and post-development conditions within the site and vicinity, no significant impacts related to increases in impervious surface area or associated runoff levels and velocities would occur as a result of the proposed project.

Mitigation Measures, Monitoring and Reporting Program

No mitigation is required because no significant impacts have been identified.

Issue 2: Would the proposal result in a substantial alteration to on- or off-site drainage patterns due to changes in runoff flow rates or volumes?

As described above under Issue 1, no significant impacts related to increased runoff volumes or flow rates would occur as a result of the proposed project, with the increase in overall post-development flows from the site limited to approximately 0.9 cfs (Appendix G). Project implementation would also retain the overall on- and off-site drainage patterns described under Existing Conditions (refer to Figure 5.8-2), with flows from the site continuing to enter storm drain facilities and/or adjacent natural areas and eventually drain to the coast via unnamed canyons and Box Canyon to the west and north.

Significance of Impact

Based on the above-described conditions, no significant impacts associated with changes in on- or off-site drainage patterns or downstream flood hazards related to modified runoff volumes or rates are anticipated from project implementation.

Mitigation Measures, Monitoring and Reporting Program

No mitigation is required because no significant impacts have been identified.

Issue 3: Would the proposal result in an increase in pollutant discharges, including sediment, hazardous materials, urban pollutants or other contaminants, to downstream receiving waters during or following construction that would exceed or violate any existing water quality discharge standards?

Potential project-related water quality impacts are associated with both short-term construction activities and long-term site operation and maintenance. Project-related activities would not result in any direct effects to groundwater quality though activities such as underground storage of hazardous materials. Accordingly, potential impacts to groundwater quality would be limited to the percolation of surface runoff and associated contaminants generated within the project. The following assessment of potential water quality impacts is therefore applicable to both surface and groundwater resources.

Short-term Construction

Potential water quality impacts related to project construction include erosion/sedimentation, the on-site use and storage of construction-related hazardous materials (e.g., fuels, etc.), the generation of debris from demolition activities and the disposal of extracted groundwater (if required), as described below.

Erosion and Sedimentation

Proposed excavation, grading and construction activities within the project site could potentially result in erosion and off-site sediment transport (i.e., sedimentation). Specifically, project activities would involve: (1) removal of existing surface stabilizing features such as vegetation and hardscape (pavement and structures); (2) excavation of existing compacted materials from cut areas; (3) redeposition of excavated (and/or imported) material as fill in proposed development sites; (4) potential sediment generation from demolition and paving activities; and (5) potential erosion from disposal of extracted groundwater (if required). Project-related erosion could result in the influx of sediment into downstream receiving waters, with associated water quality effects such as turbidity and transport of other contaminants that tend to adhere to sediment particles (such as hydrocarbons).

000909 While graded/excavated areas and fill materials associated with the above described activities would be stabilized through efforts such as compaction and installation of hardscape and landscaping, erosion potential would be higher in the short-term than for existing conditions. Developed areas would be especially susceptible to erosion between the beginning of grading/construction and the installation of hardscape or establishment of permanent cover in landscaped areas. Erosion and sedimentation are not considered to be significant long-term concerns for the project because developed areas would be stabilized through the described installation of buildings, hardscape and landscaping. The project would also incorporate long-term water quality controls pursuant to City and NPDES guidelines, including measures that would avoid or reduce off-site sediment transport. Specifically, this would include efforts such as the use of vegetated drainage facilities, inlet filters, irrigation controls and drainage facility maintenance (i.e., to remove accumulated sediment). Additional discussion of long-term water quality measures is provided below under Long-term Operation and Maintenance.

The short-term water quality effects from project-related erosion and sedimentation described above could potentially affect downstream waters and associated wildlife habitats, with such impacts considered potentially significant. Short-term (construction) erosion and sedimentation impacts would be addressed through conformance with the NPDES Construction Permit and associated City Storm Water Standards outlined above under Regulatory Framework. Specifically, this would include implementing a SWPPP for proposed construction, including erosion and sedimentation BMPs. While specific BMPs would be determined during the SWPPP process based on site-specific characteristics (soils, etc.), they will likely include standard industry measures and guidelines contained in sources such as the NPDES Construction Permit text, City Storm Water Standards, and the additional regulatory and industry sources listed under Regulatory Framework.

The project WQTR identifies a list of preliminary construction BMPs, including erosion/sediment control measures. Specifically, identified construction erosion/sedimentation BMPs include the use of devices/efforts such as silt fence, fiber rolls, gravel bags, bonded fiber matrix, mulching, soil stockpile/solid waste management, stabilized construction entrances, paving controls (e.g., concrete washouts) and energy dissipation (Appendix H). Additional BMPs from the previously referenced regulatory and industry sources that may be applicable to the proposed project include the following measures: (1) seasonal grading restrictions during the rainy season (October 1 through April 30); (2) preparation and implementation of a "weather triggered" action plan during the rainy season to provide enhanced erosion and sediment control measures prior to predicted storm events (i.e., 40 percent or greater chance of rain); (3) use of phased grading schedules to limit the area subject to erosion at any given time; (4) storage of BMP materials in applicable on-site areas to provide "standby" capacity adequate to provide complete protection of exposed areas and prevent off-site sediment transport; (5) provision of training for the personnel responsible for BMP installation and maintenance; (6) compliance with local dust requirements (e.g., regular application of water and/or palliatives); (7) installation of permanent landscaping, with emphasis on native and/or drought-tolerant varieties, as soon as feasible during or after construction; (8) implementation of appropriate

000910 monitoring and maintenance efforts (e.g., prior to and after storm events) to ensure proper BMP function and efficiency; (9) implementation of sampling/analysis, monitoring/reporting and post-construction management programs per NPDES and/or City requirements; and (10) implementation of additional BMPs as necessary (and required by appropriate regulatory agencies) to ensure adequate erosion and sediment control.

Construction-related Hazardous Materials

Project construction would involve the on-site use and storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The accidental discharge of such materials could potentially result in significant impacts if such materials reach downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations. As described above for erosion/sedimentation (and under Regulatory Framework), implementation of a SWPPP would be required under NPDES and City guidelines, and would include detailed measures to avoid or mitigate potential impacts related to the use and potential discharge of construction-related hazardous materials.

The project WQTR identifies preliminary construction BMPs related to the use and storage of hazardous materials during construction, including the identification of specified areas for material/equipment storage and vehicle maintenance, and proper containment of construction and pavement wastes. Additional BMPs from the previously referenced regulatory and industry sources that may be applicable to the proposed project include the following measures: (1) restricting paving operations during wet weather and use of sediment control devices downstream of paving activities; (2) minimizing the amount of hazardous materials stored on-site and restricting storage/use locations to areas at least 50 feet from storm drains and surface waters; (3) using raised (e.g., on pallets), covered and/or enclosed storage facilities for all hazardous materials; (4) maintaining accurate and up to date written inventories and labels for all stored hazardous materials; (5) using berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill; (6) placing warning signs in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal; (7) providing training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill; (8) storing absorbent and clean-up materials in appropriate on-site locations where they are readily accessible; (9) properly locating and maintaining trash and wastewater facilities; (10) posting regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location at or near the job site trailer; (11) regularly (at least weekly) monitoring and maintaining hazardous material use/storage facilities and operations to ensure proper working order; and (12) implementing a SWSAS program pursuant to regulatory guidelines.

000911 Demolition-related Debris Generation

The project would involve the demolition of existing facilities including structures and pavement. These activities would generate variable amounts of construction debris, potentially including concrete, asphalt, glass, metal, drywall, paint, insulation, fabric, wood and other materials. Proposed demolition activities could also potentially generate particulates (e.g., dust from structure razing or pavement demolition), as well as contaminants related to hazardous materials including lead-based paint and asbestos insulation. The introduction of demolition-related particulates or hazardous material contaminants into the local storm drain system could potentially result in significant downstream water quality impacts.

Project construction would be subject to a number of regulatory controls related to demolition, including City Storm Water Standards, NPDES/SWPPP requirements and the hazardous materials controls described above under Regulatory Framework. The project SWPPP would include measures to address potential effects associated with contaminant generation from demolition activities, with detailed requirements to be determined as part of the SWPPP process. A number of standard BMPs would likely be applicable, including the following: (1) restricting construction debris storage areas to appropriate locations at least 50 feet from storm drain inlets and water courses; (2) using appropriate storage facilities for construction debris, including adequately sized watertight dumpsters, covers to preclude rain from contacting waste materials, impervious liners, and surface containment features such as berms, dikes or ditches to prevent runoff; (3) employing a licensed waste disposal operator to regularly (at least once a week) remove and dispose of construction debris in an authorized off-site location; (4) recycling appropriate (i.e., non-hazardous) construction debris for on- or off-site use whenever feasible; (5) use of dust-control measures such as watering to reduce particulate generation for pertinent locations/activities (e.g., concrete removal); and (6) use of erosion prevention and sediment control measures downstream of all demolition activities.

Demolition-related activities involving hazardous materials would conform to the associated regulatory requirements described above under Regulatory Framework. Such conformance would include applicable measures to: (1) regulate sampling and monitoring procedures; (2) contain/abate contaminated materials during construction; (3) provide protective gear for workers handling contaminated materials; (4) ensure acceptable exposure levels; and (5) provide for safe and appropriate handling, transport and disposal of hazardous materials generated during project construction.

Disposal of Extracted Groundwater

As previously described, shallow perched groundwater may be encountered during project-related excavation and construction. Disposal of groundwater extracted during construction activities into local drainages and/or storm drain facilities could potentially generate significant water quality

impacts through erosion/sedimentation (i.e., if discharged onto graded or unstabilized areas), or the possible occurrence of contaminants in local groundwater aquifers.

Project construction would require conformance with applicable NPDES Groundwater Extraction and Waste Discharge Permit criteria prior to disposal of extracted groundwater (as outlined under Regulatory Framework). While specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined based on site-specific parameters, they would likely include the following types of standard measures derived from the NPDES Permit text and the previously referenced regulatory/industry sources: (1) use of erosion prevention and sediment control devices for applicable conditions (e.g., if extracted groundwater is discharged onto graded or unstabilized areas); (2) testing, filtering (e.g., with gravel and filter fabric media) and/or treatment (e.g., by conveyance to a municipal wastewater treatment plant) of extracted groundwater prior to discharge if required for NPDES permit conformance; and (3) removal of groundwater by a licensed operator for treatment and disposal if required for NPDES permit conformance.

Long-term Operation and Maintenance

Potential project-related long-term water quality impacts are associated with the generation of urban and industrial contaminants from site operation and maintenance. The project WQTR (Appendix H) identifies pollutants and conditions of concern and appropriate control measures related to site development, based on procedures identified in the City Storm Water Standards and related documents, as well as the NPDES Municipal and Industrial permits. Project-related long-term water quality impacts would be ~~precluded~~ reduced to the Maximum Extent Practicable (MEP) through compliance with the City's Storm Water Standards. The Storm Water Standards BMPs, identified in the project WQTR are contained in the following summary of the WQTR analysis. Additional detail is provided in Appendix H.

The proposed project is identified as a "High Priority Project" based on criteria identified in the City's Storm Water Requirements Applicability Checklist (Appendix H). Based on this classification and proposed development features, anticipated and potential contaminants identified for the proposed project include sediment, nutrients, heavy metals, oil and grease, organic compounds, oxygen demanding substances, pesticides, trash and debris, bacteria and viruses, and pesticides (Appendix H). Additional information regarding typical sources and concentrations (or loadings) for urban contaminants is provided in Appendix H and Tables 5.8-1 and 5.8-2.

Long-term project operation and maintenance could result in the generation and off-site transport of urban and industrial contaminants from the identified sources, with associated potential effects such as increased turbidity, oxygen depletion and toxicity to attendant species in downstream receiving waters. As described above under Regulatory Framework, the project would be required to conform to applicable NPDES and City Storm Water Standards, with such conformance to include the use of

000913 appropriate post-construction site design, source control and treatment control BMPs. Site design BMPs are intended to control post-development runoff, erosion potential and contaminant generation by mimicking the natural hydrologic regime, while source control BMPs are designed to reduce the potential for contaminant generation and transport. Site design and source control BMPs can effectively reduce project-related runoff and contaminant generation, although urban and industrial development (such as the proposed project) typically results in contaminant generation even with the use of such measures. Accordingly, treatment control (or structural) BMPs are normally required to remove pollutants from urban and industrial runoff through means such as filtering, treatment or infiltration. Detailed design and location data for all BMPs identified for the proposed project are provided in Appendix H.

Compliance with the BMPs taken from the City's Storm Water Standards would ~~preclude-reduce to~~ the MEP direct water quality impacts related to long-term project site operation and maintenance. Site design BMPs would include minimization of impervious surfaces; routing of rooftop runoff through vegetated areas on site; and appropriate landscaping on graded areas, and in some instances on rooftops, with native and drought-tolerant species. Source control BMPs would include stenciling, monitoring and maintenance of project-related storm drain inlets; and site-appropriate landscaping and irrigation, to incorporate Integrated Pest Management techniques and maintained by a qualified landscape maintenance firm. Treatment control BMPs would include the incorporation of vegetation or rock-lined swales in the site's storm drain system, and the installation of storm drain filter inserts at all project storm drain inlets, to provide filtration prior to off-site discharge. Finally, the applicant shall be responsible for all long-term maintenance of private facilities/areas within the project site, including roads, parking areas, storm drains, open space areas and amenity/common areas. The project applicant shall enter into a Storm Water Management and Discharge Control Maintenance Agreement with the City of San Diego to ensure the establishment and maintenance of permanent BMPs within the project site, as described in the project WQTR.

Significance of Impact

Short-term Impacts

Based on the preliminary BMPs identified in the project WQTR, existing regulatory requirements from the NPDES Construction Permit text and City Storm Water Standards, and associated guidelines from the regulatory and industry sources noted above under Regulatory Requirements, the project SWPPP would incorporate appropriate BMPs to address potential effects from construction-related erosion and sedimentation, hazardous material use and storage, demolition, and disposal of extracted groundwater (if required). Accordingly, short-term water quality impacts from the noted construction-related activities would be ~~precluded-reduced to the MEP~~ through compliance with the City's Storm Water Standards.

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Long-term Site Operation and Maintenance Impacts

Anticipated and potential contaminants identified for the proposed development in the project WQTR include sediment, nutrients, heavy metals, oil and grease, organic compounds, oxygen demanding substances, pesticides, trash and debris, bacteria and viruses, and pesticides. Compliance with the BMPs taken from the City's Storm Water Standards would ~~preclude~~ reduce to the MEP direct water quality impacts related to the long-term generation of such contaminants and the location of the project site in close proximity to sensitive receiving waters (i.e., the Pacific Ocean).

Mitigation Measures, Monitoring and Reporting Program

No mitigation is required because no significant impacts have been identified.

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5.9 GEOLOGY

Three site-specific geologic investigations have been conducted for the proposed project, which are described in a Geological Reconnaissance Report prepared by Southern California Soil & Testing, Inc. (SCS&T; 2004), and Fault Hazard and Slope Stability studies completed by Kleinfelder, Inc. (Kleinfelder; 2005a, b). Additional background materials used for the following analysis include two geotechnical investigations for Pump Station No. 45 improvements located adjacent to the project site (Group Delta Consultants, Inc. 2000a, b). Pertinent information from the referenced (and other applicable) sources is summarized below, with the SCS&T report included as Appendix I, and the Kleinfelder reports included as Appendix J of this EIR.

5.9.1 Existing Conditions

Geologic/Topographic Setting

The project site is within the Peninsular Ranges Geomorphic Province, a region characterized by northwest-southeast trending structural basins and intervening fault zones. The Peninsular Ranges Province extends approximately 900 miles from the Transverse Ranges and Los Angeles Basin to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. The eastern portion of the province exhibits mountainous terrain composed primarily of Mesozoic (between approximately 65 and 250 million years old) igneous and metamorphic rocks, while the coastal region exhibits low-lying terraces underlain by mainly Tertiary (between approximately 65 and 2 million years old) and Quaternary (less than approximately 2 million years old) sedimentary strata. The project site is typical of the described coastal areas, and is underlain by the Tertiary Scripps Formation and the Quaternary Lindavista Formation. Additional description of on-site geologic and surficial deposits is provided below under Stratigraphy.

As noted above, the project site is located in an area of coastal marine terraces, with local topography characterized by steep coastal bluffs and relatively flat adjacent mesa tops incised by canyon drainages. The eastern half of the site and portions of the northwestern project area along Torrey Pines Scenic Drive are located on mesa tops that have been previously developed and exhibit generally level topography. Undeveloped portions of the southwestern and northwestern site area encompass mesa tops with somewhat undulating terrain that slopes toward off-site canyon drainages. Onsite elevations range from approximately 230 feet above mean sea level (amsl) on north-facing slopes in the southwestern portion of the property, to 375 feet amsl along portions of the north-central site boundary adjacent to Torrey Pines Scenic Drive.

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Stratigraphy

Field exploration conducted as part of the project Slope Stability Evaluation included site reconnaissance and mapping, as well as the previously noted three exploratory borings drilled to depths of approximately 91 feet below existing grade. These borings were located in areas proposed for development along steeper slopes in the northwestern and southwestern portions of the site, with specific locations, boring logs and additional information provided in Appendix J.

Two surficial deposits and two geologic formations were observed onsite during the referenced geologic investigations. The surficial materials include artificial fill associated with existing development and native topsoils, while the geologic units include the Pleistocene (between approximately 11,000 and 2 million years old) Lindavista Formation and the Eocene (approximately 38 to 55 million years old) Scripps Formation. Descriptions of on-site geologic and surficial deposits are provided below in order of increasing age, with additional information included in Appendices I and J.

Artificial Fill

Fill deposits within the project site are associated with existing development in the eastern and northwestern areas, and are generally derived from the on-site soil and/or formational materials described below (SCS&T 2004, see Appendix I). Fill deposits observed during on-site exploratory borings conducted by Kleinfelder (2005b, see Appendix J) consisted of medium-dense clayey sand, with some gravel and construction debris. Portions of the on-site fill were observed by SCS&T to be engineered in place (Appendix I).

Topsoil

Topsoil mapping within the site has been conducted by the U.S. Natural Resources Conservation Service (NRCS, formerly the U.S. Soil Conservation Service [SCS] 1973). Four soil series represented by one individual soil type each are mapped within the project site, with a summary description of on-site soil characteristics provided in Table 5.9-1, *Description of Mapped On-site Soil Properties*. As noted above, much of the eastern and northwestern portions of the site have been previously developed, with native topsoils in these areas likely removed or altered (e.g., by mixing with fill) during past grading and construction. Topsoil deposits in undisturbed portions of the site are assumed to be generally intact as described in Table 5.9-1.

Quaternary Lindavista Formation

The Quaternary (Early Pleistocene) Lindavista Formation is mapped within much of the project site (California Geological Survey [CGS], formerly the California Division of Mines and Geology [CDMG] 1975), with an observed on-site thickness of between approximately 23 and 35 feet (Appendix J). This formation consists of weakly to strongly cemented, reddish-brown fine-grained sandstone, with siltstone and claystone interbeds and occasional concretionary zones.

**Table 5.9-1
DESCRIPTION OF MAPPED ON-SITE SOIL PROPERTIES**

Soil Type	Physical Characteristics/Location	Expansion Potential	Reactivity	Erosion Potential
Carlsbad Gravelly Loamy Sand, 2 to 5 percent slopes	Moderately to well-drained gravelly loamy sand with a hardpan layer. These soils formed from ferruginous sandstone and are mapped on generally level mesa tops in the northwestern corner of the site.	Low	Slightly to moderately acidic (pH 5.6 to 6.0)	Low
Chesterson Fine Sandy Loam, 2 to 5 percent slopes	Moderately well-drained fine sandy loam with a clay subsoil. These soils formed from ferruginous sandstone and are mapped on generally level mesa tops in the eastern, northwestern and southwestern portions of the site.	Moderate	Moderately acidic (pH 6.1 to 6.5)	Low
Gaviota Fine Sandy Loam, 9 to 30 percent slopes	Well-drained shallow fine sandy loam derived from marine sandstone. Occurs on moderate to steep slopes in the northwestern and southwestern site areas.	Low	Moderately alkaline (pH 7.4 to 7.8)	Moderate to high
Terrace Escarpments	Very thin loamy or gravelly soil located on steeper canyon slopes in the southwestern portion of the site, and underlain by sandstone units of the Scripps Formation.	Variable with underlying geology	N/A	High

N/A = No data available

Source: SCS 1973.

Tertiary Scripps Formation

The Tertiary (Eocene) Scripps Formation outcrops in the canyon separating the north and south mesas of the project site (including portions of the Salk Institute property), and likely underlies the

Lindavista Formation throughout the site (Appendices I and J). As observed during subsurface geologic exploration (i.e., borings), the Scripps Formation consists of light brown to olive, weakly to strongly cemented fine-grained sandstone, with interbeds of siltstone and claystone and occasional concretionary zones.

Groundwater

Groundwater was not observed within the site during project exploratory borings drilled to a depth of approximately 91 feet (Appendix J), and no known data are available regarding the on-site occurrence or depth of groundwater. A number of unrelated exploratory borings in the site vicinity encountered perched groundwater at a depth of 26 feet below the ground surface, and perched groundwater may also occur on-site at the contact between bedrock materials and the overlying fill deposits (Appendix I). Perched groundwater typically consists of one or more unconfined aquifers supported by impermeable or semi-permeable strata, and are generally limited in volume and extent but can vary with seasonal precipitation and/or irrigation levels. Based on the above information, permanent shallow groundwater is not anticipated to occur on-site, although perched groundwater may potentially be present. In addition, it should be noted that groundwater may potentially occur after development in areas where no pre-development groundwater was present, due to alteration of soil permeability, drainage patterns and/or runoff volumes (Appendix I).

Structure and Seismicity

The major geologic formations in the project site and vicinity include Tertiary marine sedimentary strata of the Scripps Formation, and Quaternary marine and non-marine deposits of the Lindavista Formation. Bedrock units underlying the site were not observed to contain joints during project geologic investigations, with the Lindavista Formation identified as generally massive (i.e., lacking distinct structure such as bedding). As observed in exploratory borings, the Lindavista Formation unconformably overlies the Scripps Formation, with the contact between these two units dipping (i.e., inclined from the horizontal plane) approximately four degrees to the northwest. Observations of the Scripps Formation during site borings identified a number of contacts between individual bedding units, with these contacts exhibiting average dips of approximately 13 degrees to the southeast (Appendix J).

The project site is within a broad seismically active region characterized by a series of northwest trending fault zones associated with the San Andreas Fault System (Figure 5.9-1, *Regional Fault Map*). A number of these fault zones and the associated individual faults are classified as active or potentially active by the CGS. Active faults are defined as those exhibiting historic seismicity or displacement of Holocene (less than approximately 11,000 years old) materials, while potentially active faults have no historic seismicity and displace Pleistocene but not Holocene strata. Specific active fault zones in the region include the Rose Canyon, Coronado Bank, San Diego Trough and San Clemente fault zones to

the west and south, the Elsinore and San Jacinto fault zones to the northeast, and the Agua Blanca and San Miguel fault zones to the south. Based on information provided in the project Slope Stability Evaluation (Kleinfelder 2005b, Appendix J), the maximum horizontal ground acceleration value identified for the project site is 0.28 g where g equals the acceleration due to gravity. This figure is derived from a design basis earthquake having a 10 percent probability of being exceeded during a 50-year period, and is associated with a mode magnitude of approximately 6.8 along proximal segments of the Rose Canyon Fault Zone (approximately 1.7 miles west of the site).

Existing geologic mapping of the project site and vicinity by the CDMG (1975) depicts the Salk Fault traversing the northwestern portion of the site, with a related fault zone mapped in the City of San Diego Seismic Safety Study (1995) extending east-northeast through the northwestern portion of the site (Figure 5.9-2, *Previous and Current Mapped Locations of the Salk Fault and City Fault Zone*). Based on geologic mapping and stereoscopic air photo interpretation conducted as part of the project Fault Hazard Study (Kleinfelder 2005a, see Appendix J), it was determined that the Salk Fault is located approximately 100 to 150 feet further north and trends more to the northeast (i.e., as opposed to more easterly) than depicted on the referenced CDMG mapping. Based on this current mapping effort and projection of the fault trace from mapped locations, it was concluded that the Salk Fault does not extend through the project site as previously indicated, but rather is located “[s]ignificantly north of the subject site.” (Kleinfelder 2005a, see Appendix J and Figure 5.9-2).

An additional minor fault structure was observed in one of the exploratory borings conducted in the northwestern portion of the site, with this structure located within the Scripps Formation at a depth of approximately 75 feet below existing grade. The observed structure encompassed an offset of approximately four inches within a silt bed, with no offset observed in layered units above 73 feet in depth. Based on these conditions, the described fault is interpreted as a discontinuous minor structure likely related to a regional strain release from an ancient event along the Salk Fault (Appendix J).

The project Fault Hazard Study evaluated the above-described locations of the Salk Fault and City mapped fault zone to determine if active or potentially active faults are present within the project site. Pursuant to this analysis, it was concluded that “[t]he subject site is not underlain by either active or potentially active faults...”, with this conclusion based on the revised location of the Salk Fault north of the project site and the lack of observed displacement within exposures of the Lindavista and Scripps formations along the west-facing slope adjacent to the project site (Appendix J).

Regulatory Framework

The proposed project is subject to a number of regulatory guidelines related to potential geologic hazards. These guidelines typically involve measures to evaluate risk and mitigate potential hazards through design and construction techniques. Specific regulatory guidelines and industry standards

that may be applicable to the design and construction of the proposed project include: (1) the City of San Diego Grading Ordinance, and the City Seismic Safety Study (1995); (2) the International Conference of Building Officials (ICBO) Uniform Building Code (UBC; 2000); and (3) the American Society for Testing and Materials (ASTM) standards.

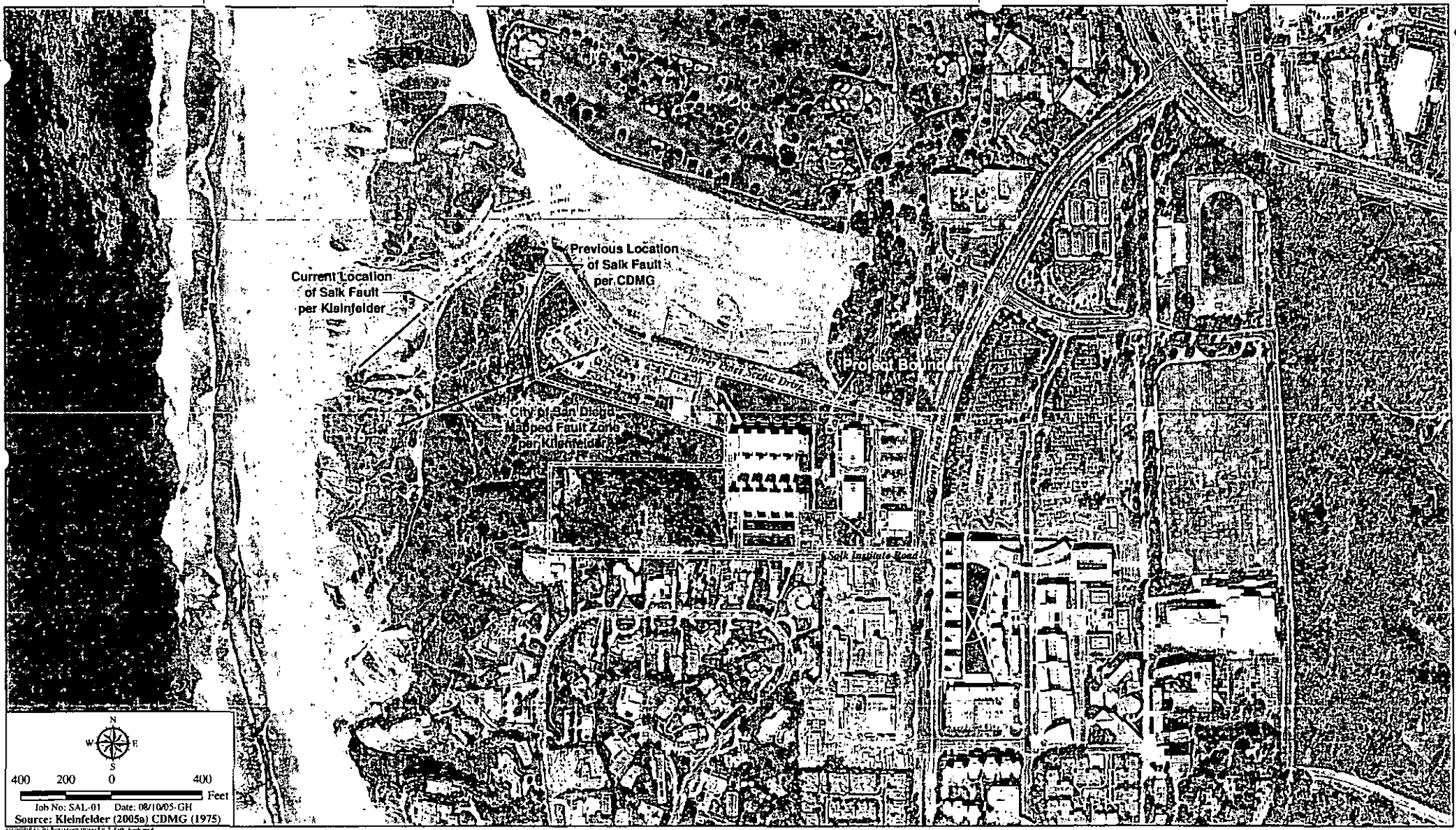
Potential geologic hazards identified for the project site in the City of San Diego Seismic Safety Study (1995) include Hazard Category 51 for the northern and eastern portions of the site, and Hazard Category 53 for the southern portion of the site. Hazard Category 51 is defined to include level mesa areas underlain by terrace deposits and bedrock with nominal risk potential, while Hazard Category 53 is assigned to level or sloping terrain and unfavorable geologic structure with a low to moderate risk (Appendix I). Additionally, Hazard Category 12 – Fault Zones; Potentially Active, Inactive, Presumed Inactive or Activity Unknown, has been identified for the northwestern portion of the project site near the mapped location of the Salk Fault (Appendix J). Specific elements of the above-described regulatory requirements and industry standards that may be applicable to the proposed project are discussed below in Section 5.9.2, *Impacts*.

5.9.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

The City of San Diego Significance Determination Thresholds (2004d) identify geologic hazards and associated risks based on technical soil and geologic data. These hazard and risk categories are then applied to various land use and development types to determine the appropriate nature and level of required geotechnical conditions investigation. Specific pre-development investigations that may be required as a result of this process include one or more of the following: (1) Preliminary Soil Report; (2) Geologic Reconnaissance Report; (3) Geologic Investigation Report; and (4) Seismic Report. The project geologic analyses (Appendices I and J) incorporate applicable elements from these studies, and meet the pertinent criteria described in the referenced City Significance Determination Thresholds. Specific discussions of geologic hazards, risks, potentially significant impacts and associated design/mitigation measures evaluated in the project geologic studies are summarized below.



Previous and Current Mapped Locations of the Salk Fault and City Fault Zone

(Fault locations dashed where inferred)

SALK INSTITUTE

Figure 5.9-2

Issue 1: Would the proposal expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure or similar hazards?

The project Geological Reconnaissance Report (SCS&T 2004; Appendix I) concludes that "[n]o geologic hazards of sufficient magnitude to preclude future development of the site as planned are known to exist...". In addition, the project Fault Hazard and Slope Stability studies (Kleinfelder 2005a, b; see Appendix J) conclude respectively that no active or potentially active faults underlie the site, and that the potential for slope instability impacts to the proposed project development is low. These conclusions are based on assessment of a number of potential geologic hazards as summarized below, with additional information provided in Appendices I and J.

Seismic Ground Rupture

Ground rupture and related effects such as lurching (i.e., the rolling motion of surface materials associated with passing seismic waves) can adversely affect surface and subsurface structures. As described above under Existing Conditions, the project Fault Hazard Study (Appendix J) concludes that no active or potentially active faults underlie the site, with the associated potential for ground rupture due to faulting considered low. Based on these conclusions, no significant impacts related to seismic ground rupture or related effects would be associated with implementation of the proposed project.

Seismic Ground Acceleration

As noted under Existing Conditions, the estimated maximum horizontal ground acceleration value identified for the project site is 0.28 g in association with magnitude 6.8 earthquake event along the Rose Canyon Fault Zone. Such an acceleration level could potentially result in impacts to proposed facilities, including damage to building foundations and utilities (depending on factors such as event duration, motion frequency and underlying soil/geologic conditions). The project design, however, would incorporate measures to accommodate projected seismic loading, in accordance with applicable guidelines including the UBC and City Grading Ordinance. These guidelines are intended to provide standard specifications for engineering and construction activities, including measures to accommodate seismic loading parameters. Grading and development plans would also be reviewed by the City Engineer prior to project development. Implementation of and conformance with industry and regulatory guidelines, as well as applicable agency review, would reduce potential seismic ground acceleration impacts below a level of significance.

Liquefaction

The project Geological Reconnaissance Report (SCS&T 2004; see Appendix I) concludes that “[m]aterials at the site are not considered subject to liquefaction due to factors such as soil type, soil density and a lack of shallow groundwater.” Based on this assessment, potential liquefaction impacts associated with implementation of the proposed project would be less than significant. It should also be noted that if conditions subject to liquefaction are subsequently identified within the project (e.g., shallow perched groundwater in areas of granular, unconsolidated material), associated potential effects would be addressed through required conformance with applicable City and industry (e.g., UBC) standards. Such conformance could include remedial earthwork measures such as removal and replacement of unsuitable materials, moisture conditioning and/or recompaction, and would avoid or reduce any potential liquefaction effects below a level of significance.

Slope Stability

The occurrence of landslides and other types of slope instabilities are influenced by a number of factors, including slope grade, geologic and soil characteristics, moisture levels and vegetation cover. Slope instability can be triggered by one or more specific (or combination of) events, including seismic activity, gravity, fires, ground disturbance and precipitation. As previously noted, a Slope Stability Evaluation was conducted for the proposed project by Kleinfelder (2005b), with the complete study included in Appendix J of this EIR. The project Slope Stability Evaluation included review of pertinent background materials, field exploration and laboratory testing, with the results of these efforts used to identify slope stability strength parameters and conduct analyses of static, seismic and infinite slope stability, as outlined below. Based on the results of these investigations, the referenced Slope Stability Evaluation identifies a low potential for slope instability “[t]o the project site and planned future improvements...”. Accordingly, potential slope instability impacts from implementation of the proposed project would be less than significant.

Based on the previously described Existing Conditions analyses of static, seismic and infinite slope stability were conducted for applicable portions of the project site. These analyses identified static and infinite slope stability factors of safety exceeding 1.5 (the industry standard minimum factor of safety for static and infinite slope stability analyses), and a seismic factor of safety exceeding 1.0 (the industry threshold for seismic screening analyses). As noted above, the project Slope Stability Evaluation concludes, based on the noted analyses, that the potential for effects to the project site and planned future improvements from slope instability is low. Accordingly, associated potential slope stability impacts from implementation of the proposed project would be less than significant. Additional discussion of the methodology and criteria used for the noted slope stability analyses is provided in Appendix J.

Tsunamis and Seiches

Tsunamis (commonly referred to as tidal waves) are seismic sea waves produced by events such as submarine earthquakes or volcanic eruptions, and can generate impacts related to inundation in coastal zones. Because the project site is located between approximately 230 and 375 feet amsl, the project Geological Reconnaissance Report (SCS&T 2004; see Appendix I) concludes that the potential for tsunamis to affect the site is negligible. Accordingly, no significant impacts related to tsunamis would occur in association with implementation of the proposed project.

Seiches are defined as wave-like oscillatory movements in enclosed or semi-enclosed bodies of water such as bays, harbors, lakes or reservoirs, and are associated predominantly with seismic activity. This phenomenon can result in flooding damage and related effects (e.g., erosion) in surrounding areas from spilling or sloshing water, as well as increasing pressure on containment structures. Because the site is not located adjacent to or downslope of any large water bodies, the project Geological Reconnaissance Report (SCS&T 2004; see Appendix I) concludes that the potential for seiches to affect the site is negligible. Accordingly, no significant impacts related to seiches are identified in association with implementation of the proposed project.

Significance of Impact

Project implementation would not be subject to significant impacts related to fault rupture or slope instability. The proposed project would also not be subject to significant impacts from tsunamis and seiches, and is not considered subject to liquefaction effects due to the nature of on-site materials and the lack of shallow groundwater. The project could be subject to potentially significant impacts related to seismic ground acceleration, and if unanticipated conditions such as shallow groundwater are encountered, could potentially be subject to significant liquefaction effects. These anticipated and potential effects would be avoided or reduced below a level of significance, however, through implementation of standard design, engineering and construction practices in conformance with existing regulatory requirements and industry guidelines.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts have been identified; therefore, no mitigation is required.

Issue 2: Would the proposal result in a substantial increase in wind or water erosion of soils either on or off-site?

Pursuant to the discussion under Existing Conditions (refer to Table 5.9-1), the project site encompasses a number of steep hillsides and topsoil deposits that exhibit moderate to high potential for erosion and off-site sediment transport (i.e., sedimentation).

As discussed in Section 5.8, *Hydrology/Water Quality*, of this EIR, proposed excavation, grading and construction activities within the project site could potentially result in erosion and sedimentation. Developed areas would be especially susceptible to erosion between the beginning of grading/construction and the installation of hardscape or establishment of permanent cover in landscaped areas. Erosion and sedimentation are not considered to be significant long-term concerns for the project because steep hillsides would not be graded and developed areas would be stabilized through the installation of hardscape and landscaping. The project would also incorporate long-term water quality controls pursuant to City and NPDES guidelines, including measures that would avoid or reduce off-site sediment transport such as the use of vegetated drainage facilities, inlet filters, irrigation controls and drainage facility maintenance (e.g., to remove accumulated sediment).

Short-term (construction) erosion and sedimentation impacts would be addressed through conformance with the NPDES Construction Permit and associated City Storm Water Standards outlined in Section 5.8, *Hydrology/Water Quality*. Specifically, this would include implementing a Stormwater Pollution Prevention Plan (SWPPP) and associated erosion and sedimentation best management practices (BMPs) through the use of best available technology (BAT) and best conventional pollutant control technology (BCT) technology. Conformance with the noted standards would ensure that applicable regulatory requirements are met, and would reduce potential construction-related erosion and sedimentation impacts below a level of significance.

Significance of Impact

Based on the required conformance with existing regulatory standards and industry guidelines outlined above (and discussed in detail in Section 5.8, *Hydrology/Water Quality*, of this EIR), potential project-related erosion and sedimentation impacts would be reduced below a level of significance.

Mitigation Measures, Monitoring and Reporting Program

No mitigation is required because no significant impacts have been identified.

Issue 3: Would the proposal be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Potential project-related landsliding and liquefaction impacts are discussed above under Issue 1 of this section. No potential hazards related to lateral spreading, subsidence or collapse were identified in the project geologic investigations (Appendices I and J), although potential concerns were noted in association with expansive soils and oversize materials as outlined below.

Expansive Soils

Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals, and can adversely affect the integrity of facilities such as foundations or pavement. The project Geological Reconnaissance Report (SCS&T 2004; see Appendix I) notes that limited expansive soils would likely require consideration in future grading of the site, and Table 5.9-1 identifies on-site soils with moderate expansion potential. If potential impacts related to expansive soils are encountered in association with proposed project development, remedial measures would be incorporated into project design and construction in accordance with applicable guidelines including the UBC and City Grading Ordinance. Specifically, these measures could include standard industry practices such as removal and replacement of unsuitable materials, and/or placement of expansive soils in deeper fills and away from slopes and developed areas. Grading and development plans would also be reviewed by the City Engineer prior to project development. Implementation of and conformance with industry and regulatory guidelines, as well as applicable agency review, would avoid or reduce potential impacts from expansive soils below a level of significance.

Oversize Materials

The project Geological Reconnaissance Report (SCS&T 2004; see Appendix I) notes that well-cemented deposits of the Lindavista Formation may be encountered during site grading, requiring the use of heavy ripping equipment/operations. While such activities would not represent significant impacts per se, they could potentially generate oversize materials that pose potentially significant impacts if improperly handled or disposed of onsite. Specifically, the presence of oversize materials in engineered fills can result in effects such as differential compaction and settlement (i.e., varying degrees of settlement over short distances), with related issues including adverse effects to overlying structures, utilities and drainage. If potential impacts related to oversize materials are encountered in association with proposed project development, remedial measures would be incorporated into project design and construction in accordance with applicable guidelines including the UBC and City Grading Ordinance. Specifically, these measures could include standard industry practices such as restricting the maximum dimension of materials placed in soil fill to 12 inches or less, and requiring specific location and depth parameters for placement of larger materials in soil-rock fills (e.g., restricting the

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placement of larger materials away from slope faces and requiring minimum depths below finish grade and utilities). Grading and development plans would also be reviewed by the City Engineer prior to project development. Implementation of and conformance with industry and regulatory guidelines, as well as applicable agency review, would avoid or reduce potential impacts from oversize materials below a level of significance.

Significance of Impact

The proposed project may be subject to potential impacts related to expansive soils and oversize materials. These potential effects would be avoided or reduced below a level of significance, however, through implantation of standard design, engineering and construction practices in conformance with existing regulatory requirements and industry guidelines.

Mitigation Measures, Monitoring and Reporting Program

No significant impacts are identified; therefore, no mitigation is required.

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5.10 PALEONTOLOGICAL RESOURCES

5.10.1 Existing Conditions

Paleontological resources (fossils) are the remains and/or traces of prehistoric animal and plant life, exclusive of human remains or artifacts. Fossil remains such as bones, teeth, shells and leaves are often found in the geologic deposits (rock formations) within which they were originally buried. Because of this, the potential for fossil remains at a given location can be predicted based on known correlations between fossil occurrence and the geologic formations with which they are associated.

To evaluate paleontological resources within the project site, the presence and distribution of geologic formations and their respective potential for containing paleontological resources were reviewed. The following is a summary of on-site geologic conditions and the associated paleontological resource potential.

As described in Section 5.9, *Geology*, surficial and geologic materials observed or projected to occur during site geotechnical reconnaissance include artificial fill, topsoil, Lindavista Formation, and Scripps Formation. Known fossil occurrences are generally rare in the Pleistocene-age Lindavista Formation, but include marine invertebrates such as clams, snails and scallops, as well as occasional vertebrate remains (e.g., sharks and whales). Fossil occurrences in the Scripps Formation include marine vertebrate (e.g., sharks and bony fish) and invertebrate (e.g., clams, snails and crabs) remains, as well as terrestrial vertebrates (e.g., rhinoceros).

Paleontological resource sensitivity is generally defined as follows:

- High Sensitivity - These formations contain a large number of known fossil localities. Generally speaking, highly sensitive formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- Moderate Sensitivity - These formations have a moderate number of known fossil localities. Generally speaking, moderately sensitive formations produce invertebrate fossil remains in high abundance or vertebrate fossil remains in low abundance.
- Low or Unknown Sensitivity - Low sensitivity is assigned to those formations that contain only a small number of known fossil localities and typically produce invertebrate fossil remains in low abundance. Unknown sensitivity is assigned to formations from which there are presently no known paleontological resources but which have the potential for producing such remains based on their sedimentary origin.

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- Very Low Sensitivity - Very low sensitivity is assigned to geologic formations that, based upon their relatively young age or high-energy depositional history, are judged unlikely to produce any fossil remains.

The geologic formations on site and their corresponding sensitivities as regards the proposed project site are noted in Table 5.10-1, *Paleontological Resource Potential*.

Table 5.10-1 PALEONTOLOGICAL RESOURCE POTENTIAL	
GEOLOGIC FORMATION	SENSITIVITY RATING
Lindavista Formation	Moderate
Scripps Formation	High

Source: City of San Diego 2004b

5.10.2 Impacts

As noted in the Preface to this Final EIR, the applicant has decided to eliminate the employee daycare facility and temporary housing quarters from the proposed Salk Institute Master Plan. Although no longer a part of the proposed project, the environmental analyses of these components remain in the EIR because their removal from the Master Plan has little bearing on the conclusions reached in this section.

Significance Criteria

According to the City of San Diego Significance Determination Thresholds (2004d), impacts are to be assessed based on the paleontological sensitivity of the geologic formations known to occur on the project site. For high sensitivity formations such as the Scripps Formation, potentially significant impacts are identified if grading would exceed 1,000 cubic yards (cy) and extend to depths of 10 feet or more.

Issue 1: Would the proposal impact a unique paleontological resource or site or unique geologic feature?

Impact

As described in Section 5.9, *Geology*, much of the project site is underlain by the Scripps Formation, which exhibits a high paleontological resource sensitivity rating, and the Lindavista Formation, which exhibits a moderate paleontological resource sensitivity rating. According to the geologic

investigations (Appendix I) conducted for the project, the Scripps Formation likely underlies (is beneath) the Lindavista Formation. All other materials observed or expected to occur on-site have very low resource sensitivity and are unlikely to produce any fossil remains.

Grading for the proposed project would encompass approximately 30,000 cy of cut and 5,000 cy of fill and 200,000 cubic yards of basement/parking excavation, and it would locally extend to a maximum depth of 15 feet (e.g., the basement level research facility). Based on these conditions and the above-described significance thresholds, the proposed project could potentially result in significant impacts to paleontological resources.

As described in the *Existing Conditions* portion of Section 5.9 of this report, the project site has been previously graded. Subsurface geologic units that may be impacted by the proposed project are the Scripps and Lindavista Formations, which occur widely in southwestern San Diego County. While these formations do not exhibit structures or characteristics that could be considered unique geologic features, they do have moderate (Lindavista) and high (Scripps) sensitivity ratings; thus, significant impacts could potentially occur as a result of project implementation.

Significance of Impact

Due to the on-site occurrence and high resource sensitivity of the Scripps and Lindavista Formations, implementation of the project could potentially result in significant impacts to paleontological resources. The mitigation measures described below would avoid or reduce these impacts to below a level of significance. No unique geologic features are known or expected to occur on site, and no associated project-related impacts are anticipated.

Mitigation Measures, Monitoring and Reporting Program

The following measures would avoid or reduce potential impacts to paleontological resources below a level of significance.

5.10-1 Prior to Permit Issuance

A. Entitlements Plan Check

1. Prior to Notice to Proceed (NTP) for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, but prior to the first preconstruction meeting, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

B. Letters of Qualification have been submitted to ADD

1. The applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

5.10-2 *Prior to Start of Construction*

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the Construction Manager and/or Grading Contractor.
 - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Identify Areas to be Monitored
Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. The PME shall be based on the results of a site specific records search as well as information regarding existing known soil conditions (native or formation).
3. When Monitoring Will Occur
 - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.

- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5.10-3 During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities.**
2. The monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion**), and in the case of ANY discoveries. The RE shall forward copies to MMC.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and, shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
 - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
 - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC. Impacts to significant

resources must be mitigated before ground disturbing activities in the area of discovery will be allowed to resume.

- c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.
- d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

5.10-4 Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
 2. The following procedures shall be followed.
 - a. No Discoveries
In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSVr and submit to MMC via fax by 8AM on the next business day.
 - b. Discoveries
All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction.
 - c. Potentially Significant Discoveries
If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
 - d. The PI shall immediately contact MMC, or by 8AM on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night work becomes necessary during the course of construction
 1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

5.10-5 Post Construction

A. Preparation and Submittal of Draft Monitoring Report

1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
 - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
 - b. Recording Sites with the San Diego Natural History Museum
The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
2. MMC shall return the Draft Monitoring Report to the PI for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate

C. Curation of fossil remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC that the draft report has been approved.

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2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

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6.0 OTHER CEQA SECTIONS

6.1 GROWTH INDUCEMENT

CEQA requires that environmental documents analyze the potential for a project to induce direct or indirect population growth, economic development and additional housing construction (Public Resources Code Section 21100; CEQA Guidelines Section 15126.2[d]). This includes projects that remove obstacles of growth by accommodating additional population or construction, such as expansion of major public service facilities. The CEQA Guidelines (Section 15126.2[d]) state, "It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The proposed project would add 94,200 square feet (sf) of scientific research space, 117,000 sf of Salk Community Center Building space, and 4,000 sf of greenhouses, ~~a 12,000-sf private daycare facility and 12,000 sf of temporary residential quarters,~~ and demolish 29,000 sf of existing temporary buildings. The proposed facilities, in combination with existing buildings on the site, would result in a total of 500,000 sf of scientific research-based development on the Salk Institute (Institute) campus.

The proposed project would increase the current staff and graduate student population of 1,100 by approximately 15 percent, resulting in approximately 165 additional people at the Institute. The labor pool within the San Diego area is adequate to provide most of these employees, particularly the staff required for support positions, although certain technical positions with unique specializations could be filled by individuals from outside the area. Expansion of the Institute would, therefore, have a minimal effect on regional population growth because it would result in a small amount of direct and indirect increase in population. However, the amount of growth would be small in comparison to the region as a whole, and the project-related population increase would render the project consistent with the local *University Community Plan* and the San Diego Association of Governments (SANDAG) 2030 Regional Growth Forecast (Regional Forecast). The 2004 Regional Forecast and the subsequent 2006 update to the Regional Forecast examine key growth trends for the San Diego region during the period between 2005 and 2030, with the primary trend being continued increased growth, albeit at a slower rate over the long term. Furthermore, the region is expected to experience the continuance of population growth outpacing home construction, further compounding the area's housing problems which are reflected in the relative lack of residential opportunities in the current plans of many local jurisdictions (SANDAG 2006). Although a minor amount of pressure on the local housing supply or demand is expected to result from development of the proposed project, effects on the rental and purchasing market would be tempered by the fact that the proposed temporary housing quarters would accommodate new researchers and staff on site while they are looking for a permanent residence in the region.

000939 The project site is currently developed and is designated for urban uses and surrounded on the east and south by existing urban development and infrastructure, on the north by planned urban development associated with the University of California, San Diego (UCSD), and on the west by preserved natural open space and Torrey Pines City Park. Development of the site would not open up a new area to construction since little to no undeveloped land (except that owned by UCSD) exists in the project vicinity.

The proposed project would not require the extension or expansion of public services, utilities or infrastructure to an area not already serviced by local utilities or services. It would not require expansion of any public roads. The proposed project would be compatible with long-range plans for mass transit. Development of the proposed project would not remove any physical barriers to growth.

6.2 SIGNIFICANT IRREVERSIBLE EFFECTS

The property possesses no mineral resources, and the relatively minor (less than ~~2.00~~ 1 acres) loss of biological resources would be offset by the ~~3.221~~ 2.27-acre increase in the Multiple Habitat Planning Area (MHPA) dedication. Therefore, commitment of the site to the proposed development would not deprive the region of important mineral resources or sensitive biological resources. In addition, there would be changes in landform for the undeveloped portions of the site and permanent increases in traffic, noise and air pollutant emissions as a result of the proposed project.

Construction of the proposed development would result in incremental demands on lumber and forest products, sand and gravel, asphalt, petrochemicals and other construction materials. Construction also would incrementally reduce existing supplies of fuel oil, natural gas and gasoline. An incremental increase in energy demand would occur during operational activities including lighting, heating and cooling of additional research space, the Salk Community Center Building, daycare facility and temporary residential quarters. Therefore, the proposed project would result in long-term, irretrievable losses of non-renewable resources including energy.

The above irreversible effects are typical of most urban development and not substantial in nature on a project level.

6.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

The City Land Development Review Division determined that the preparation of an EIR was necessary to examine the following potentially significant issues: land use, visual quality/neighborhood character, biological resources, historic resources, transportation/circulation, air quality, noise, hydrology/water quality, geology and paleontological resources. Issues not considered significant (i.e., agricultural resources, health and safety, mineral resources, public services and facilities, and utilities) and the reasons for the finding of no significance for each of these issues are provided below.

6.3.1 Agriculture Resources

The proposed project would not impact agriculture resources. The project site is currently developed with buildings associated with the Institute and is surrounded by urban development and designated open space. The Institute buildings have been present since 1965, and there is no recent history of agricultural uses on site. There is no potential for viable agricultural use.

6.3.2 Health and Safety

No impacts from hazardous materials, substances or wastes are anticipated as a result of project construction and operation. As discussed in Section 5.4, *Historical Resources*, the majority of the project site is located within the former boundary of Camp Callan, a 1,283-acre U.S. Army training center that operated during World War II. The camp, opened in January 1941, was primarily a training center for new inductees with an emphasis on modern coast artillery and anti-aircraft defense weapons. Camp Callan was declared surplus in November 1945. There is no evidence that facilities or activities associated with the military training camp resulted in the deposition of any hazardous materials or substances on the project site. During the initial grading for, and construction of, the Institute in the early 1960s, no military-training-related materials were uncovered and it is expected that none would be encountered during grading activities for the proposed project. Also, the project site is not listed on the California Department of Toxic Substances Control's Hazardous Waste and Substances Site List (Cortese List).

As discussed in Section 5.6, *Air Quality*, the Institute anticipates that the types and amounts of hazardous materials that would be handled in the expanded facility would be similar to the types and amounts that are currently handled on site. As shown in Table 5.6-8, the amounts of materials classified as hazardous are stored in negligible amounts at the Institute. Most of the materials are present on site in amounts less than 1 pound (for solids) or 1 gallon (for liquids), and the amount of storage would not substantially increase with the proposed project. The substances that are stored in greater quantities include inert gases, which are non-reactive, and alcohols, which are also used as common household solvents. The materials are handled in laboratories within a controlled environment that includes laboratory hoods. In the improbable event of an accidental spill, the amounts that would be released would be minor, and it is unlikely that the proposed project would expose sensitive receptors to substantial emissions of hazardous contaminants because of the small quantities stored and used.

The project would not involve the development of a hazardous waste facility and is not located within the vicinity of an active or former landfill. The project site is not located in an area known or suspected to contain contamination sites. The project would not involve dewatering or major excavation; therefore, no permanent dewatering would occur as a result of constructing the project. Demolition of old structures suspected of containing asbestos or other hazardous materials may occur

on the site; however, hazardous waste regulations are in place to prevent any accidental release of such substances into the environment. The project site is not located within or adjacent to any areas that have a high public safety risk, such as airport accident potential zones, and permanent buildings are not proposed in a floodway.

6.3.3 Mineral Resources

Impacts to mineral resources are not anticipated as a result of project implementation. The project site is located within mineral land classification MRZ-3, as shown on the California Department of Conservation, Division of Mines and Geology, Mineral Land Classification Map (Special Report 153; 1982). The MRZ-3 classification identifies areas "containing mineral deposits the significance of which cannot be evaluated from available data." Although this category indicates that insufficient information is available to determine mineral resource value, it also implies that a high resource value is unlikely. In addition, the project site is in an urban area, as indicated on the Mineral Land Classification Map.

6.3.4 Public Services and Facilities

Police and Fire-Rescue Services

A description of the police department resources in the project area is provided in Section 3.0, *Project Description*, of this EIR. Impacts to the City of San Diego Police Department's (SDPD's) service capabilities are anticipated to be less than significant for a number of reasons. The proposed project is anticipated to result in approximately 165 new positions at the Institute over several decades, including both support staff and research or technical staff. Although many of the support jobs could be satisfied by people within the region, the technical positions could be filled by people outside the San Diego area due to the nationally (and internationally) recognized status of the research institute. Therefore, the proposed project could result in an increased demand on police service in the City, should new personnel relocate near the facility. The 12 housing units proposed on campus would not substantially increase the population in the community such that response times would be affected because it would be a minimal change in local population. Therefore, development of the proposed project is not expected to substantially decrease SDPD's ability to service the project area.

A description of the fire department resources in the project area is provided in Section 3.0, *Project Description*, of this EIR. Less than significant impacts to fire service are anticipated from the proposed project for a number of reasons. Although the proposed project would slightly increase the intensity of urban development currently on site by expanding the square footage of the Institute and by adding the Salk Community Center Building, a daycare center, and temporary housing and 165 new personnel, the project is an expansion of an existing use within an urban area. Fire hydrants exist and more are proposed on the site, and Salk Institute Road would be improved out to the western end of

the property for increased fire department access. Brush management would be implemented around the proposed structures to reduce the potential fire risk associated with being adjacent to open space. There would not be increased fire risk due to greater susceptibility to wildfire because the majority of the development is proposed on the developed portion of campus. The 12 temporary housing units would not substantially increase population numbers in the community such that response times would be affected. The proposed project would not decrease the City of San Diego Fire-Rescue Department's ability to serve the site or the surrounding area.

Schools

The proposed project would result in the creation of 165 new employment positions at the Institute, which could be satisfied by residents in the region and could lure new people to the area over the decades-long buildout of the facility. A certain percentage of the new hires could live in the City and bring family members into the local school district. The 12 temporary housing units, an ancillary use to the Institute, would provide short-term lodging for new and visiting researchers and support staff and would not likely produce a large amount of school-age children due to their small size and transient nature of the tenants within the units. No permanent housing units would be provided. The increase in school age children attributable to the proposed project would be minimal and not result in a substantial impact on school population. Payment of mandatory school impact fees by the Institute would offset any potential effects on schools.

Libraries

A description of the libraries in the project area is provided in Section 3.0, *Project Description*, of this EIR. The proposed project would not significantly impact libraries in the project area because the population increase attributable to the expansion would not be substantial and a portion of the new positions would be filled by people already in the region. In addition to the two existing and one planned public library within five miles of the project site, the Institute maintains its own research libraries on site, and UCSD houses six different libraries on its campus that would be available to individuals associated with the Institute. The 12 temporary housing units would not substantially increase demand for library services in the area, given existing resources at the Institute.

Parks and Recreational Resources

A description of the parks in the project area is provided in Section 3.0, *Project Description*, of this EIR. The proposed project is not anticipated to significantly impact parks or recreational areas because six local parks are located within three miles of the project site. In addition to local parks, the Torrey Pines Golf Course, a City golf course open to the public, is located north of the project site; the entrance to Torrey Pines State Park is situated nearly four miles north of the project site; the Torrey Pines Gliderport is located adjacent to the project site and UCSD has recreation facilities that non-

campus residents can use for a fee. Also, two recreational areas are located within 1.5 miles of the proposed project site. It is anticipated that park use by new researchers and staff would be minimal since they would likely use recreation facilities near their homes rather than near their work. Because of the proximity and availability of these recreational areas, as well as the anticipated minimal use by new Institute employees, significant impacts to area parks and recreational resources would not occur.

6.3.5 Public Utilities

Electrical Power and Natural Gas

The proposed project would not adversely affect non-renewable resources. Electricity and natural gas would be used for the operation of the expanded facility. Proposed land uses (e.g., research and support facilities) would not use excessive amounts of energy. The project would incorporate a variety of energy-saving measures, low-flow plumbing, motion-sensor lights, energy-efficient light fixtures and moisture-sensitive irrigation systems, and would not conflict with any adopted energy conservation plans. The proposed project would use building materials and insulation in accordance with Title 24 and the UBC requirements, reducing the unnecessary loss of energy. Timers would control exterior security and accent lighting to reduce unnecessary use of electricity. Demands on energy supplies from the proposed project would not require new sources of energy. Construction vehicles and automobiles of employees and visitors would use fossil fuels. No known economic mineral or fossil fuel resources are present on the project site.

Solid Waste Generation/Disposal

The City of San Diego Environmental Services Department (ESD) provides solid waste services to the project area. The City disposes of approximately 2 million tons of refuse annually (City of San Diego 2004g). The Miramar Landfill, at 5180 Convoy Street, is located on U.S. government property leased and operated by the City. The landfill receives more than 1.4 million tons of waste per year. As of the year 2002, the total remaining capacity was estimated at 13.8 million tons of the total capacity (City of San Diego 2005h), which would be reached in approximately 8.5 years (i.e., November 2011).

Project construction would generate a relatively small quantity of demolition debris when the existing temporary buildings, surface parking and hardscape are redeveloped on 11 acres of the site (29,000 sf total). The project would be phased over several decades, so the quantity of demolition debris would be minimal as each individual project is implemented. Project operation would generate solid waste on a continual basis. New recyclable material collection areas are planned on site to reduce the total amount of project-generated solid waste. In addition, the Institute uses recycled paper in offices. The proposed project is an expansion of an existing facility and is not anticipated to generate sufficient construction- or operation-related solid waste that would result in a significant impact to landfill resources.

Water and Sewer

Primary water and sewer service to the portions of the site proposed for development would be accommodated through connections to existing facilities located on or near the property or by stand-alone dedicated mechanical units, as described in detail in Section 3.2.4.7, *Utilities and Public Services*. As the proposed expansion would create a demand for additional water and sewer service at the site, that demand would be satisfied through the provision of new private mains either within the project site or in immediately adjacent roadways (i.e., Torrey Pines Scenic Road and Salk Institute Road). The current, off-site water system infrastructure is adequate to satisfy the ultimate potable and irrigation water, fire protection flow, and sewer demands of the proposed project. The proposed project would construct a private sewer pump station to convey wastewater into the public gravity main in Salk Institute Road. In addition, the recycled water from the project could be used for existing and proposed irrigation, which would reduce water demands from the facility. As such, impacts to water and sewer service are anticipated to be less than significant. Additionally, a water supply assessment is not needed for the proposed project because the project's demand on water would be below thresholds defined in Section 10912 of the State Water Code.

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